AN HBJ PUBLICATION

OCTOBER 1986/$2.50

WEEDS TREES & TURF

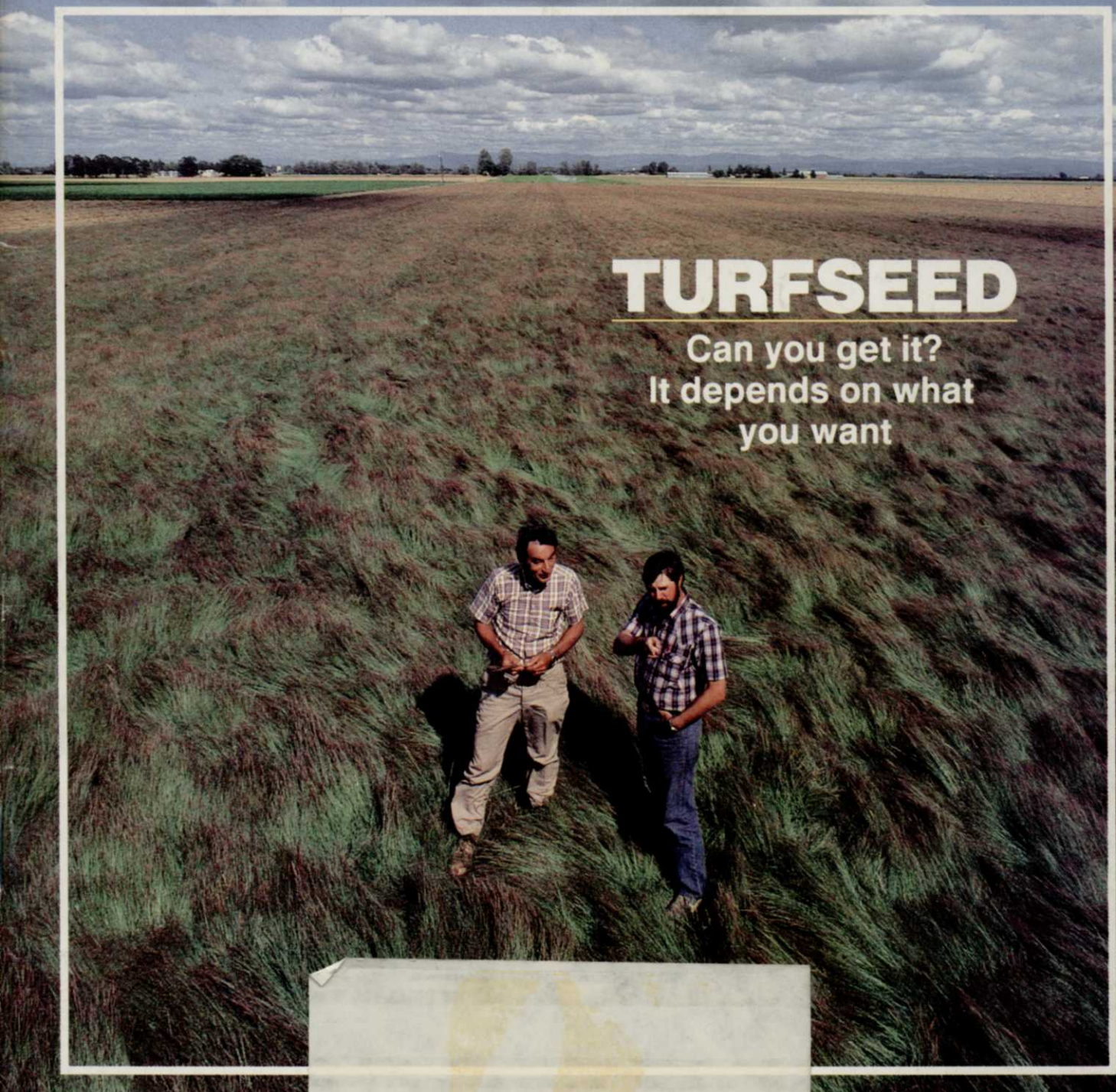
The Magazine of Landscape and Golf Course Management Since 1962

The boom in resort management

Halting green June beetle damage

Giving water a helping hand

10·20·86



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DURSBAN 50W insecticide in water soluble packaging. One less hazard for your course. See your ag chemicals distributor.

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DURSBAN*50W

One less hazard

Circle No. 113 on Reader Inquiry Card

OK, Doug. What is it about Scotts new ProTurf 22-0-22 NK Fairway Fertilizer that makes it a high quality product? "We use only top quality ingredients. All the potassium is in the form of potassium sulfate. The nitrogen is balanced between quick- and slow- release forms. And each high-density particle is homogeneous... providing a consistent feeding."

What does that mean on a fairway? "Several things—quick greenup, a greening effect that lasts up to two months, even distribution of nutrients. Also, less chance of burning turf, the addition of sulfur to the soil, and no chloride salts."

And you say it's designed for fairways? "Yes. It's composed of large particles that throw a wide, even swath from a rotary spreader."

What benefits do I get from a high potassium feeding? "It's been shown that potassium will enhance turfgrass performance—better drought hardiness, improved disease resistance, more tolerance to wear, things like that. And studies on bermudagrass attribute reduced winterkill to high potassium."

Sounds like it would be hard to go wrong with ProTurf 22-0-22 NK Fairway Fertilizer. "That's right. It can be applied any time, and it's very versatile, too. You can use double rates spring and fall in the north and all summer in the south. Half rates are great for cool season grasses during the hot summer months."

Can you sum all that up, Doug? "ProTurf 22-0-22 NK Fairway Fertilizer is a great program complement to our regular Fairway Fertilizer at 32-3-10 and our High K Fairway Fertilizer at 15-0-30."

For more information on Scotts new ProTurf 22-0-22 NK Fairway Fertilizer, call your ProTurf Tech Rep. Or call Scotts direct at 800-543-0006. In Ohio, call collect (513) 644-2900.

Circle No. 137 on Reader Inquiry Card

"Superintendents have been talking about a high quality 1-0-1 product designed for fairways. We've been listening."

Doug Horn, Scotts Research project leader (Fertilizer R&D), talks about new **ProTurf 22-0-22 NK Fairway Fertilizer.**

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The Magazine of Landscape and Golf Course Management Since 1962

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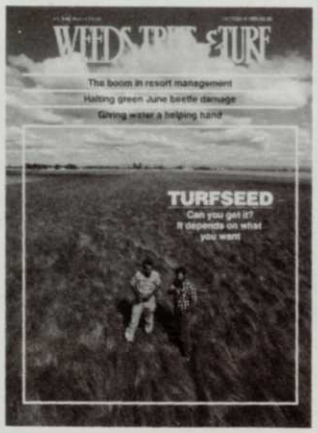

ON THE COVER: Dr. Joe Duich (left) and seed grower Ron DeConinck in an Oregon field of Pennlinks (PSU 126), by Larry Kassell

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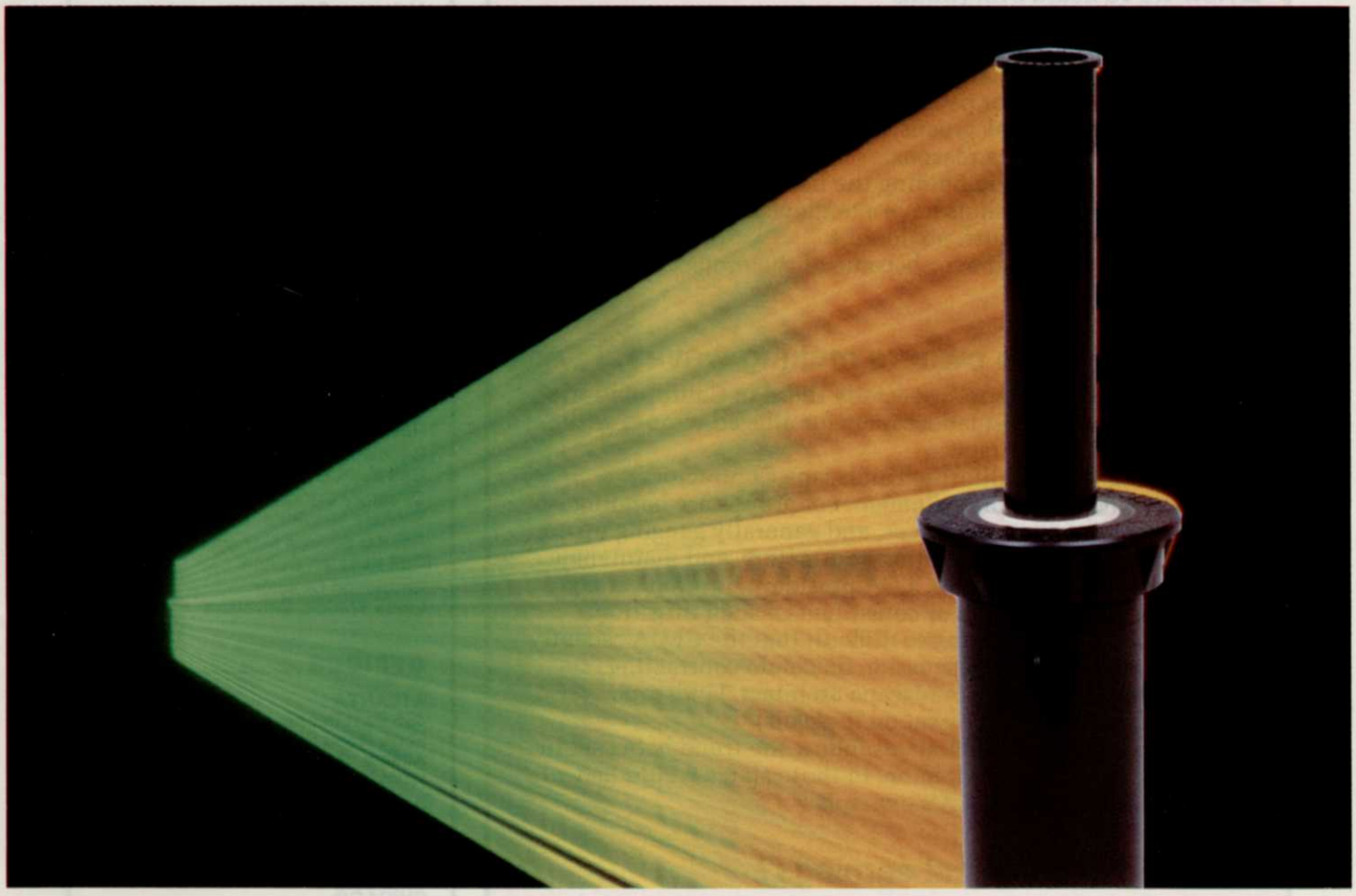

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Circle No. 141 on Reader Inquiry Card

NEWS/TRENDS

Artificial putting surfaces?

■ Now we've heard everything.

Not too long ago, an architect called the WEEDS TREES & TURF office asking if we had any information about artificial putting surfaces. He was in charge of designing a "life care facility" in Connecticut, a home for people 62 or more years old. It seems his client wanted artificial greens on the facility's three-hole golf course for maintenance reasons.

"The main concern is holding the ball," the architect told us. (Nine iron and wedge shots have a tendency to bounce a bit upon impact with artificial turf, no doubt.)

We don't know what ever became of the project, but we hope the owners wised up.

California condo owners making waves

■ Condominium owners—especially those in California—are bringing actions against landscapers for alleged wrongs with their landscaping contracts.

According to the California Landscape Contractors Association (CLCA), condo homeowner groups are banding together, pooling their resources, and generally ganging up on landscape architects, installation contractors, and maintenance contractors. Roger D. Fiske, CLCA president, is often called upon as an expert witness or consultant in such litigation.

The problem is becoming so difficult that the CLCA recently offered a one-day panel discussion on condo contracting liability. Besides Fiske, a landscape architect, landscape contractor, and an attorney sat on the panel.

If condo owners in other states follow the trend being set in California, landscape contractors in those states would be well-advised to follow the CLCA's example.

Rebound in chemical earnings?

■ The end of 1986 is to bring a rebound in earnings among chemical companies, according to a survey in *Chemical Week* magazine. The survey predicted an increase in earnings per share by all but two of 25 prominent chemical companies.

Chemical Week cited cost-cutting programs by most companies as one of the reasons for higher earnings. Du Pont, Monsanto and Dow, for example, offered early-retirement incentive programs. On its cover, *Chemical Week* projected a 41 percent increase in earnings for Dow, a 59 percent increase for Monsanto, a 25 percent increase for Du Pont, and a 39 percent increase for American Cyanamid.

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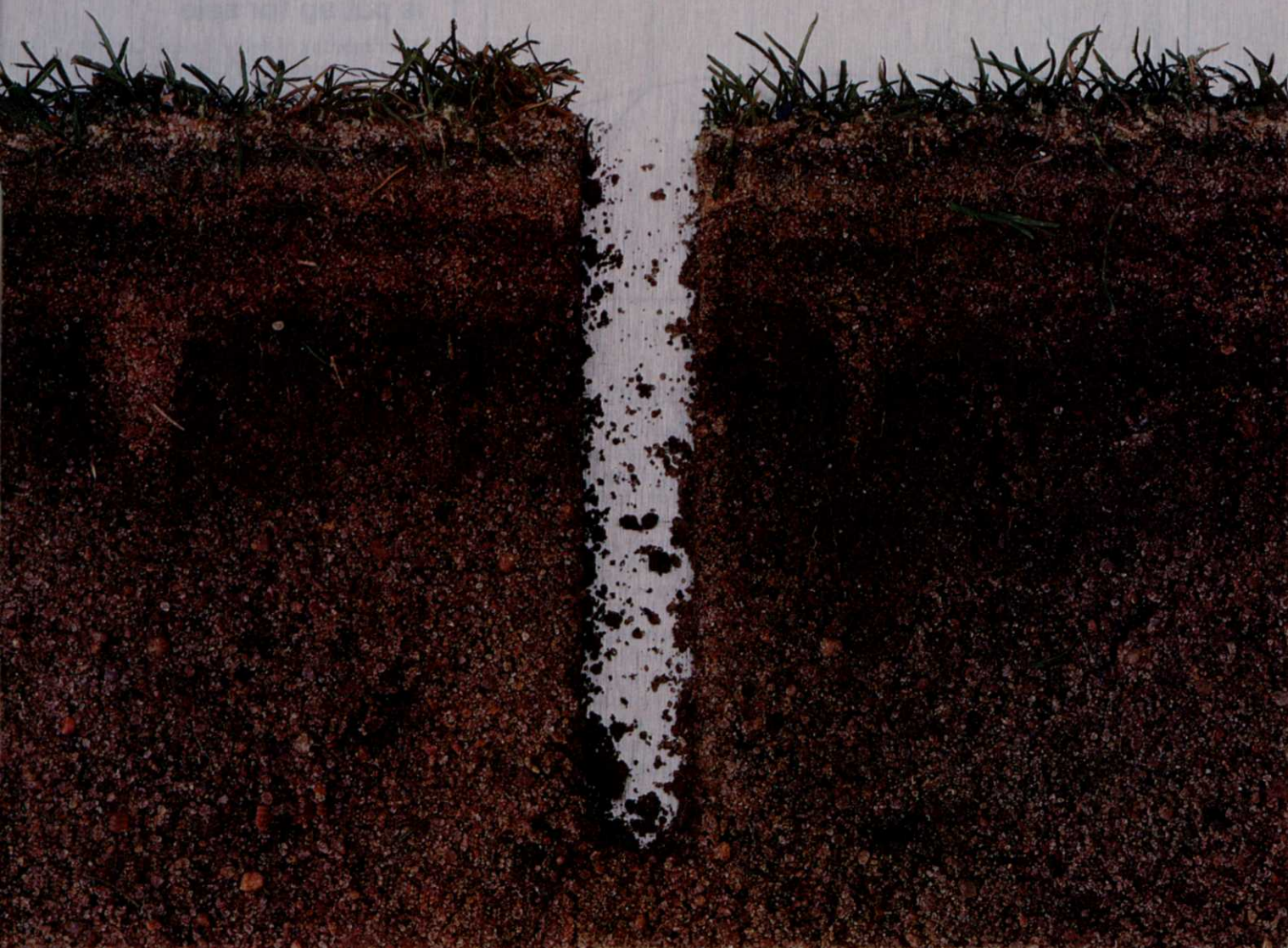


SALARIES

Midwest boasts highest workers' wages

According to a wage survey conducted by the Professional Grounds Management Society (PGMS), landscape workers make more money in the Midwest than in other parts of the country.

A permanent laborer in the Midwest pulls in an average of $8.32 per hour (the Midwest includes North Dakota, Minnesota, South Dakota, Wisconsin, Michigan, Nebraska, Iowa, Illinois, Indiana, and Ohio).

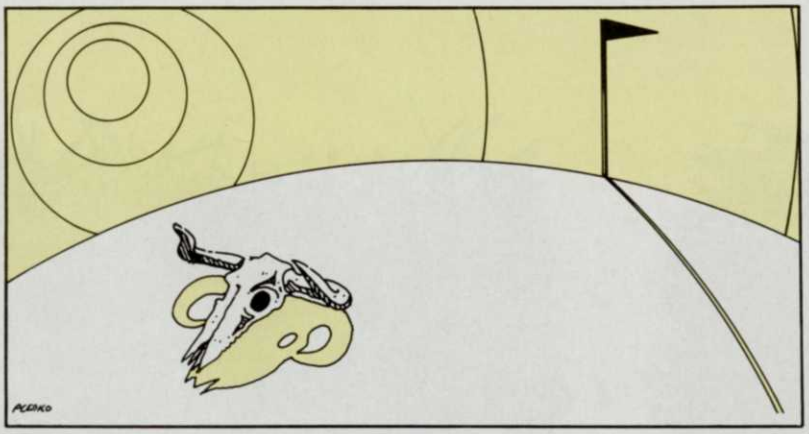
His counterpart in other areas of the country doesn't make as much. In the Northeast, the average is $7.43. Other areas: Far West, $6.57; Mid-Atlantic, $6.54; Southwest, $5.87; and Southeast, $4.82.

PGMS 1986 Salary survey by region

	North East	South East	Mid Atlantic	Mid West	South West	Far West
Assistant	$10.32	$8.01	$8.98	$10.18	$8.34	$10.56
Foreman	$8.98	$6.15	$8.15	$9.32	$7.96	$8.28
Mechanic	$9.08	$7.48	$8.66	$10.03	$7.20	$8.87
Seasonal Laborer	$5.39	$4.30	$4.98	$4.72	$4.47	$4.81
Permanent Laborer	$7.43	$4.82	$6.54	$8.32	$5.87	$6.57

The Midwest foreman fares better than his peers in other areas. He pulls an average hourly wage of $9.32 compared to the others: Northeast, $8.98; Far West, $8.28; Mid-Atlantic, $8.15; Southwest, $7.96; and Southeast, $6.15.

The survey was based on 157 responses from the PGMS membership.



GOLF

Summer drought devastates Southeast courses

Water rationing and dry irrigation ponds on golf courses in the Southeastern U.S. this summer have altered maintenance practices of many superintendents.

Less frequent mowing and fertilization became common practices because of a lack of rainfall in June and July.

"We were about 14 inches below average for rainfall," noted Dave Powell of Myers Park Country Club, Charlotte, N.C. "As a result, we just barely kept the grass alive and green. We cut our water use back to a third of what we normally use."

Added Andy Brennan of Temple Hills Golf and Country Club, Nashville, Tenn.: "I normally have five lakes that I pump from, but I emptied a couple. We also lowered our fertilization rates."

Things were as bad in Georgia. "My fairways were really brown and off-color," said Randy Nichols of Cherokee Town and Country Club, Dunwoody. "We lost some bermudagrass on the fairway, and bermudagrass is hard to kill. There is such stress on the grass that (at one point) we didn't mow any fairways, roughs or tees in 3½ weeks."

Besides cutting back irrigation and fertilization, Nichols also didn't allow golfers to stray from cart paths.

CHEMICALS

Union Carbide agchem is put up for sale

After months of delay, Union Carbide put its Agricultural Chemicals Division up for sale in July. Though the division has had its share of problems the past 1½ years—including the gas leak in Bhopal, India—the decision to sell was actually made last year, Union Carbide president Robert D. Kennedy claims.

"It came as no surprise," says Tom Arnold, manager of specialty products. "We'd been hearing rumors for months. The people around here are treating it like it's finally a relief to know for sure we're on the block."

Arnold would not speculate on what would happen to personnel since the buyer is yet to be determined.

Value of the agchem division is placed somewhere around $500 million. Possible buyers mentioned by industry analysts include FMC (a major Union Carbide customer), PPG Industries, Dow Chemical, Rhom and Haas, Monsanto, American Cyanamid, BASF, Ciba-Geigy, Hoechst, and Imperial Chemical Industries.

The *Wall Street Journal* speculated that the division was put up for sale because Union Carbide wanted to reduce a $5.5 billion debt incurred earlier this year while fending off a takeover bid by GAF.

Union Carbide manufactures Weedone DPC herbicide and Sevin insecticide for the turf market.

LANDSCAPING

L.A. Beautiful aids landscape contractors

Other large cities might take Los Angeles as a good example of a community and its industry working hand-in-hand.

Witness Los Angeles Beautiful, a non-profit organization that cooperates with southern California landscapers to keep the public vista looking as clean and beautiful as possible.

"The landscape is part of your life," claims Gail Watson, executive director. "Our slogan is 'Beauty is good business.' I don't know of any other city with quite as comprehensive a plan as us."

Los Angeles Beautiful was the first—and remains the best—organization of its kind. It was founded in 1949 by the woman who also designed the "Keep America Beautiful" campaign.

Serving as technical advisors to the organization are Stewart Sperber of Valley Crest Tree Service, John Boething of Boething Tree/Land Nursery, and Rose Marie Head, chairperson of the California Landscape Contractors Association. Burton Sperber and Bob Scofield of Environmental Industries are judges in L.A. Beautiful's annual community awards program, which draws about 200 entries and recognizes the top landscape contracting companies in the area.

Gail Watson, executive director, Los Angeles Beautiful: "Our slogan is 'Beauty is good business.'"

"We feel people are responsible for their own environment," says Watson. "Beauty is not just skin deep. Environment affects attitudes. It reflects pride or lack of it; it reflects how people work."

L.A. Beautiful has also recently established a water conservation program. "We're trying to educate the public that they have choices. Basically, water conservation is people rather than plants," Watson observes.

CONVENTIONS

Four national meetings coming next month

Dual keynoters will be the highlight of the first joint ALCA/PGMS convention and trade show in Milwaukee next month. That show is one of four major national conventions involving green industry trade associations next month.

Keynoting the educational portion of the convention are former Texas and New Mexico Congressman Ed Foreman and managerial consultant George Wright. The meeting will be held Nov. 9-12 in Milwaukee's Mark Plaza Hotel. Also scheduled are presentation of the annual PGMS awards and a bus tour of Milwaukee and some of its landscape contractors.

The following week, Nov. 17-20, the seventh annual PLCAA convention and trade show will feature Dr. Charles Garfield, author of "The New Heroes of American Business." Site of the event is the 28,000-square-foot Baltimore Convention Center. "Every indication shows that floor space will be a sellout," notes PLCAA assistant executive director Doug Moody.

Former EPA administrator William Ruckelshaus will address the membership of the American Society of Landscape Architects at that convention Nov. 22-25. The event will be held at the site of this year's GCSAA show, Moscone Center in San Francisco.

Finally, the National Institute on Park and Grounds Management will hold its annual conference in Louisville, Ky. Plans include tours of Churchill Downs, Cave Hill Cemetery and the University of Louisville.

PESTICIDES

Study condemns uses of 2,4-D herbicide

Landscape managers may again be in jeopardy of losing access to 2,4-D, a popular broadleaf herbicide, following publication of a new study by the National Cancer Institute and the University of Kansas.

The study claims that farmers exposed to herbicides 20 days a year or more were 600 percent more likely to contract lymphatic cancer than people who did not work with such chemicals.

Dr. Shelia Hoar, the report's chief author, added that the higher cancer risk was particularly associated with 2,4-D. The *New York Times* quoted Dr. Hoar: "One can't base a regulatory program on one study alone, but if this finding is confirmed there would be serious regulatory implications such as restricting the use of herbicides."

John A. Moore of the EPA said that

continued on page 8

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15,778	MEAT PROCESSING
13,115	NEUROLOGY
14,607	OPHTHALMOLOGY TIMES
23,501	OPTOMETRY TIMES
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the study would probably cause his agency to re-assess laws now governing pesticides containing 2,4-D.

Dave Dietz of the Pesticide Public Policy Foundation (PPPF) has assembled a task force to deal with what could be a real problem for proponents of the compound.

"The problem with the media is that they're not reporting the whole story, and it's a good one for 2,4-D," says Dietz. "It states that casual use does not pose a risk. And for high exposure techniques, the normal precautions—wearing gloves and good hygiene—greatly reduce the risk."

Dietz's task force plans to question the authors.

"We want to know why this report does not stack up with the millions of dollars of other research," Dietz says. "We're trying to sort through this stuff, but the press, quite frankly, is providing an obstacle."

CONFERENCES

Landscape Expo to cover the spectrum

A comprehensive conference program is scheduled for the 1987 Landscape Exposition next March 3-5 at Chicago's O'Hare Exposition Center.

Concurrent seminars specifically designed for both landscape contractors and managers in the public sector will be held. In addition, special technical sessions on groundwater, thatch, herbicides, plant growth regulators, and turf renovation will be offered.

Altogether, the Landscape Expo management team plans on 30 different seminars spread out over 54 hours.

For information on exhibiting or attending, contact Dawn Pratt at HBJ Expositions and Conferences, P.O. Box 2044, Ridgefield, CT 06877; (800) 243-2815.

CONVENTIONS

PLCAA program on equipment maintenance

A special, hour-long turf equipment maintenance and service seminar is scheduled during the Professional Lawn Care Association of America Conference and Show next month in Baltimore.

The session, "Mowing Equipment Maintenance: Three Case Histories of Success," will be conducted by Rich Smith, commercial service training manager for The Toro Co., Minneapolis.

The seminar will feature a slide presentation with audio based on in

continued on page 12

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SHORTCUTS

FOLLOWING GOLF RELIGIOUSLY... The sport of golf is firmly linked with the Church of Perfect Liberty in Japan. The church operates courses in several countries, including a 36-hole spread in Japan, where some of the churches have driving ranges on their roofs. One follower says, "Golf is a favored sport because it requires such concentration on details, and because it can be played by almost anyone."

MONEY-MAKER..."A golf course that makes money plays fast." So says owner Jay Scott of Tanglewood Golf Club, Delaware, Ohio. Scott likes golfers to play their 18 holes in a maximum of 4 hours, 20 minutes. "That's when that seven minutes off the tee really clicks," he notes. The result? 280 golfers per day and a nice piece of profit.

MOVIE-MAKER... Janet Hartin, horticultural specialist for the San Bernardino County (Calif.) Cooperative Extension Service, recently helped film a motion picture that will be distributed world-wide next spring. The movie, "Seasons," was being filmed in Southern California by the people that make pictures for giant IMAX screens (those five-story moviehouses commonly found at amusement parks). Hartin re-wrote the script for technical accuracy and suggested possible shots that would be consistent with the script. She learned one thing during her stint with the film company, that these things take time. "One day, we worked 12 hours and only produced three minutes of film," she says.

A PROBLEM WEED... Wayne Perkins, golf superintendent at Colonial Country Club in Jackson, Miss. (he facetiously calls it the "Weed Capital of Mississippi"), informs WEEDS TREES & TURF that his biggest problem weed is the Virginia buttonweed. "I haven't found anything yet that will control it," he says. According to the WT&T Weed Control Guide (March, 1986), multiple applications of 2,4-D plus dicamba, Trimec, or Trex-San are almost always necessary. Researchers suggest using a non-ionic surfactant with the herbicide.

NEW KID IN TOWN... Jacklin Seed of Post Falls, Id., has a new research director, says Doyle Jacklin. Dr. Doug Brede, a Penn State University grad, has replaced Dr. Leah Brilman. Brede was previously at Oklahoma State University where one of his projects involved research on a chemical to pre-treat bluegrass seed to help prevent disease. Brede began work in September.

USEFUL INFORMATION AVAILABLE... Proceedings from the last two symposiums on turfgrasses, sponsored by ChemLawn Services Corp., are now available. Papers from the 1981 symposium on turfgrass weeds are available in "Advances in Weed Control." Proceedings from the 1982 symposium on turfgrass fertility are combined in "Advances in Turfgrass Fertility." The proceedings include up-to-date information (1986) with photos, tables, and charts. Cost is $19.50 for one or $36.50 for two. Orders can be sent to: H.G. Inc., PO Box 640, Piqua, OH 45356-9990.

terviews with actual landscape managers in three categories: in business less than one year, in business more than two years, and in business more than five years.

The session is slated for 10 a.m. on Wednesday, Nov. 19. All PLCAA registrants are eligible to attend. For further information, contact the PLCAA at (404) 977-5222.

GOLF EQUIPMENT

Deere enters golf and turf markets

John Deere has introduced 12 products designed specifically for use on golf courses, sports fields, and other intensive-care groundskeeping operations. The products signal Deere's entry into the golf and turf markets.

"We have begun to put in place a significant new distributor organization that will provide golf course superintendents and other turf managers with the service that has traditionally been the strength of our organization," says Gary Gottschalk, manager of golf and turf products.

The new products include a walk-behind greensmower, 3- and 5-gang hydraulic reel mowers, 20- and 24-hp diesel turf mowers, a boom mower, a utility vehicle, one pull-type and four 3-point hitch aerifiers.

MEETINGS

Soil is the key to healthy turfgrass

"Simply stated, a healthy, productive soil yields healthy plants less dependent upon chemicals to sustain them."

That is the philosophy of Robert Riley of Green Pro Services, Hempstead, N.Y. Riley, a noted lecturer and consultant, reviewed his own cultural program for turf at a symposium entitled "Organics...the Key to Great Lawns and Gardens."

Using his own application business as a test lab, Riley reported dramatic improvement in the overall health of his lawns. Compacted soils became much more friable and root systems averaged 9 to 12 inches deep. As soil conditions gradually improved, Riley was then able to reduce the need for pesticides.

Also on the program were Dr. Norm Hummel of Cornell University and Dr. Eliot Roberts of The Lawn Institute. Dr. Hummel pointed out that many turf managers neglect soil, focusing most of their attention strictly on top growth of turf. And Dr. Roberts underlined the points Riley had made.

"As time goes on," said Roberts,

continued on page 14

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"more professionals will swing toward this more natural system which relies on humus and organic fertilizers and decreases the emphasis on pesticides."

TREES

Chicago looks for more urbanized trees

A dispute between a Chicago arboretum and an adjacent highway could result in benefits to both—and to other cities, as well.

The 64-year old Morton Arboretum and a proposed north-south toll road connecting Chicago's northwest suburbs and O'Hare International Airport are the focus of the debate.

The East-West Tollway has run along the southern edge of the arboretum for years. Now, the new route would run down the east side of the arboretum and cut 12 acres off the corner of the 1,500-acre site.

The arboretum has brought suit. And—although the Army Corps of Engineers is still investigating the environmental impact of the highway—an agreement has been reached.

The road will be built below ground level as it passes through the arboretum to minimize noise. The tollway authority also has set up a $2.5 million trust fund.

George Ware, Morton's research director, suggested spending the $200,000 generated each year from the trust fund to study the problems created by the road, developing breeds of plants and trees for urban settings, and planting them along the highway for testing.

"There are adversities galore for living plants in urban environments," Ware says. "As our society becomes ever more urbanized, we need ever more kinds of plants that can cope with this harsh environment of man's."

Ware's researchers have identified several promising varieties of trees and shrubs from China. Tolerant poplars and willows, and even the American elm will also be studied.

Ware and others have spent more than a decade developing several new breeds of disease-resistant elms, some of which are sold under the name of Accolade.

Ware's research will help develop plants and trees which can resist the constant assault of car fumes, road salting, pets, and construction. "City streets and expressways are, by nature, not very forestlike," he says. "So if we can't change the city, maybe we can change the plants to make them more tolerant."

PEOPLE

Arizona Contractors name exec director

Charles L. Richardson is executive director of the **Arizona Landscape Contractors Association.** He is a former U.S. government employee and graduate of Michigan State University and Yale University.

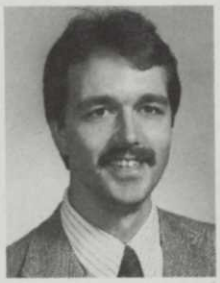
Craig Edminster joins **International Seeds** of Halsey, Ore., as research agronomist. He previously worked for the FFR Cooperative in Salem, Ore.

Craig Edminster

Gary Dorsch

O.M. Scott & Sons makes several

staff changes. **Gary Dorsch**, formerly a Scotts technical rep for the Chicago area, is named manager of customer training for the ProTurf Division. **Wayne G. Horman** is technical rep for the Lawn Care Service Supply Group of the ProTurf Division. **Steve Rudich** is technical rep for the southern New Jersey, Philadelphia, and northern Delaware areas. **Dave Henricksen, Mike Hieser**, and **Rick Elyea** join the ProTurf Division as technical reps.



Wayne Horman

The Ohio Turfgrass Foundation names its officers: president, **Ed Odorizzi,** Riviera Country Club; president-elect, **Doug Halterman,** Leisure Lawn Inc.; vice-president, **Rick Kucharski,** Winding Hollow Country Club; treasurer, **Paul Jacquemin,** Chemlawn Corp.; executive secretary, **John Street,** Ohio State University.

W.H. Clark Jr. is elected chairman of the board of the **Chemical Manufacturers Association.** He is chairman of the board, president, and chief executive officer of Nalco Chemical Co.

Fernando Lozano, former general sales manager for Dow Chemical's Latin American Agricultural Division, joins **Marman USA Inc.** as director of commercial aspects of Marman's Caribbean, and Central and South American operations.

Middlesworth Engineering and Manufacturing appoints **Tom Phillips** regional sales manager of the Turf Equipment Division. He is responsible for marketing zero-turning radius

Tom Phillips

Brendan Lynch

mowers in Indiana, Ohio, Illinois, and Michigan.

Jim Foley joins **Thompson Manufacturing** as sales rep covering Northern California. He is a former sales rep for Filtomat Inc.

Rain Bird announces several staff changes. **Brendan Lynch** is Eastern specifications manager for the Turf Division. **Scott Smart** joins Rain Bird as Rocky Mountain district manager. **Paul Syiem** is marketing coordinator for the Turf Division. **Charlotte Schmitt** is golf marketing coordinator for Rain Bird Sales. **Walt Jackson** is

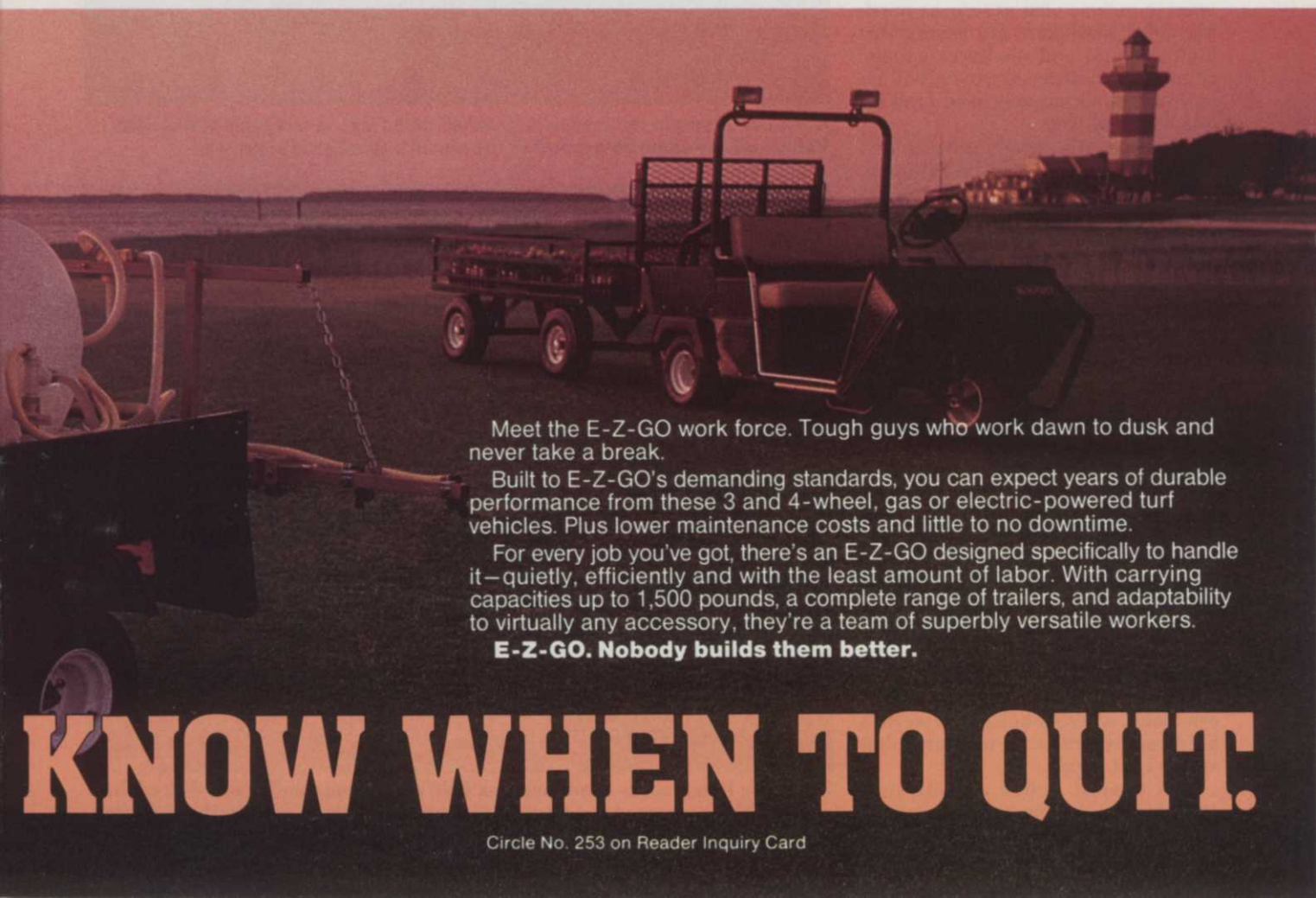
Scott Smart

Paul Syiem

appointed Turf Division marketing communications manager.

Charlotte Schmitt

Walt Jackson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THE SEED REPORT

Although yields are about average for most grasses, demand is high. Carryover from last year's harvest is light. It all adds up to a tight, but not too tight, seed market for late 1986 and early 1987.

by Ken Kuhajda, managing editor

Don't expect too much of a bargain from your local seed supplier this fall. And you might want to make a visit as soon as possible. Seed marketers are saying that high demand and mediocre supply, coupled with little carryover, will result in a quick-moving seed crop for late 1986 and 1987.

However, the good news is that price increases should be minimal. Yields look only slightly below average. Bluegrass and fine fescue appear to be in the shortest supply.

Perennial ryegrasses and tall fescues are reported at near normal levels. The bentgrass crop looks good but, again, little carryover may result in a quick sell, thereby resulting in a shortage.

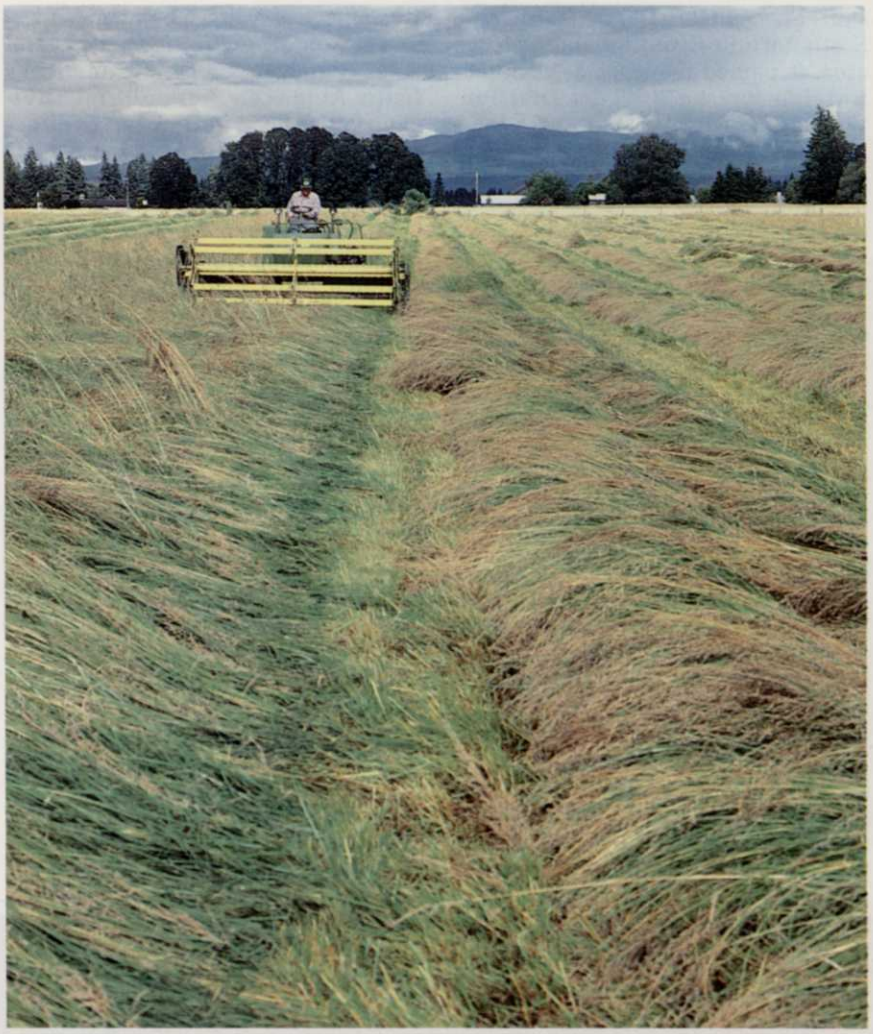
Just about normal

The fragile seed crop—so heavily dependent on Mother Nature, so precariously waving in the winds of Oregon, Washington, and Idaho—was subjected to an average weather year in most areas.

A cold, early winter hurt the crop in the Willamette Valley area of Oregon where some 60 percent of the world's seed (mostly fescue, ryegrass, bentgrass, and forage grass) is grown.

In eastern Washington and northern Idaho, where much of the world's bluegrass is grown, an unusually hot spring hurt yields.

But overall it was a pretty uneventful weather year which is good



A field of Olympic tall fescue is swathed on a farm in Oregon's Willamette Valley, where some 60 percent of the world's grass seed is grown.

Kentucky bluegrass is combined in a field near Spokane, Wash. Most of the world's bluegrass seed is grown in eastern Washington and northern Idaho.

After a field is harvested, it is burned to stimulate growth for the next year.

news for seed growers. It's also good news for the seed buyer.

The positive side

During visits to seed country, WEEDS TREES & TURF discovered that tall fescues and perennial ryegrasses should be adequately available although a small carryover and high demand may result in a quickly-moving supply.

"The perennial ryes look real good," says Harry Stalford, product manager for International Seeds. "There's been a lot of demand put on turf-type perennial ryegrass the last few years. We're pretty much sold out of our varieties of turf-type perennial ryes for 1986."

International's Big Three—Derby, Regal, and Gator perennial ryegrasses—are reported in limited supply because of high demand.

Kent Wiley, president of Pickseed West, notes: "The perennial ryes are down quite a bit from last year but they're close to average. Last year was an above-average year." He predicts a slight rise in the price of perennial ryes.

Pickseed markets Blazer, Dasher, Fiesta, and Jazz perennial ryegrasses.

Tom Stanley, marketing manager at Turf Seed Inc., reports adequate supplies of Citation II, Birdie II, and Omega II, and limited supplies of Manhattan II.

"With the Manhattan II, although production is up, demand keeps the supply tight," says Stanley.

A versatile turf

As the up-and-coming tall fescues continue to grow in popularity, they're being grown in more fields. That means a good supply—average to slightly below average this year. Demand is high.

"The tall fescue crop looks average, maybe less than average in some areas," reports Dave Nelson of the Oregon Tall and Fine Fescue Commissions. "There wasn't much of a carryover so we were pretty well cleaned out last spring. I think you'll see slightly higher prices but no dramatic increases."

Northrup-King product manager Joe Churchill is a little more optimistic. "There should be adequate supplies available due to a very good harvest," he says.

Churchill rates Northrup-King's Galway turf-type tall fescue as perhaps showing a surplus. Only Galway and Adventure turf-type tall fescue, marketed by Warren's Turf Nursery, are projected to show a surplus, according to a WT&T survey of more than 20 seed companies. The questionnaire covered all varieties of all grasses and most were rated as adequate or limited in supply (see chart).

Loft's Marie Pompei says Rebel II, a turf-type tall fescue and rising star, is available in limited supply but the price should be stable.

Jacklin Seed, Post Falls, Id., markets Arid turf-type tall fescue, and company president Doyle Jacklin is cautiously optimistic.

"It's availability is low because demand is high, but the yield is right where we projected," he says. "We just wish we had more seed."

A turf the green industry may see more of is dwarf turf-type tall fescue. Lesco Inc. vice-president of research and development Art Wick says Lesco's Trailblazer dwarf is available in limited supply. He predicts a growth in popularity.

"Trailblazer has a significantly reduced overall growth habit," reports Wick. "Its mature growth height, if not mowed, is 40 to 50 percent lower than the growth height of other turf-types. Under mowing conditions, it shows a slower vertical growth rate."

Wick says Trailblazer appears closer in texture to Kentucky bluegrass than other turf-type tall fescues, shows a darker green color, and estab-

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★Need more be said?

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TURFSEED AVAILABILITY

AVAILABILITY KEY
A = surplus **B** = adequate **C** = limited

KENTUCKY BLUEGRASS

VARIETY	MARKETER	AVAILABILITY
A-34 Bensun	Warren's	C
Adelphi	Jacklin, Adikes	C
America	Pickseed	B
Aspen	Northrup King	C
Banff	Pickseed	B
Baron	Lofts	B
Blacksburg	Turf Seed	C
Bronco	Pickseed	C
Challenger	Turf Seed	C
Cheri	Jacklin	C
Columbia	Turf Seed	C
Dawn	Lesco	C
Eclipse	Jacklin/Gf. Wms.	C
Enmundi	Seed Research	C
Fylking	Jacklin	C
Georgetown	Lofts	B
Geronimo	Jacklin	C
Glade	Jacklin	C
Haga	Burlingham	C
Harmony	Seed Research	B
Holiday	Cenex	C
Huntsville	Jacklin	C
Julia	Lesco	B
Liberty	Garfield Williamson	C
Merion	Jacklin	C
Merit	Full Circle	B
Midnight	Turf Seed	C
Mystic	Lofts	C
Nassau	Jacklin	B
Nugget	Jacklin, Pickseed	B/C
P-104	Lofts	C
Parade	Northrup King	C
Plush	Cenex	C
Ram I	Jacklin	B
Rugby	Northrup King	C
Sydsport	Burlingham	C
Touchdown	Pickseed	C
Wabash	Jacklin	C

PERENNIAL RYEGRASS

All*Star	Jacklin/Adikes	C	Manhattan II	Turf Seed	B
Belle	Burlingham	B	NK 200	Northrup King	C
Birdie II	Turf Seed	B	Omega II	Gf. Wms./Turf Seed	B/C
Blazer	Pickseed	B	Palmer	Lofts	B
Citation II	Turf Seed	B	Pennant	Burlingham	C
Cowboy	Lofts	B	Pennfine	Northrup King	B
Dasher	Pickseed	B	Prelude	Lofts	B
Delray	Northrup King	B	Premier	Normarc	B
Derby	International Seeds	C	Regal	International Seeds	C
Diplomat	Lofts	C	Regency	Lesco	C
Eton	Northrup King	C	Repel	Lofts	C
Fiesta	Pickseed	B	SR 4000	Seed Research	C
Gator	International Seeds	C	SR 4031	Seed Research	C
Goalie	Northrup King	B	SR 4100	Seed Research	C
Jazz	Pickseed	B	Vintage	Lesco	B
Magnum	Adikes	C	Yorktown II	Lofts	B

TURF-TYPE TALL FESCUE

Adventure	Warren's	A	Maverick	Pickseed	B
Apache	Turf Seed	B	Mustang	Pickseed	B
Arid	Jacklin	C	Olympic	Turf Seed	B
Bonanza	Adikes	B	Pacer	International Seeds	B
Cimarron	Lesco	C	Rebel	Lofts	B
Clemfine	Lofts	B	Rebel II	Lofts	C
Falcon	Burlingham	C	SR 8000	Seed Research	C
Galway	Northrup King	A	Tempo	Normarc	B
Houndog	International Seeds	B	Trailblazer (dwarf)	Lesco	C
Jaguar	Garfield Williamson	B/C	Trident	Seed Research	C

FINE FESCUE (CHEWING AND RED)

Agram	Pickseed	B	Koket	Burlingham	C
Checker	International Seeds	B	Logro	Jacklin	B
Dawson	Northrup King	B	Novorubra	Burlingham	C
Ensylva	International Seeds	B	Ruby	Northrup King	B
Flyer	Turf Seed	C	Shadow	Turf Seed	C
Fortress	Turf Seed	B	Victory	Pickseed	B
Jamestown	Lofts	B			

HARD FESCUE

Aurora	Turf Seed	C	Spartan	Pickseed	B
Reliant	Lofts	C	SR 3000	Seed Research	C
Sara	Normarc	C	Tournament	Pickseed	B
Scaldis	Northrup King	B	Waldina	Turf Seed	C

BENTGRASS

Emerald	International Seeds	C	Pennston	Normarc	C
Exeter	Pickseed	C	Pennway	Tee-2-Green	C
Penncross	Tee-2-Green	C	Prominent Creeping	Seed Research	B
Penneagle	Tee-2-Green	C	SR 1020	Seed Research	C

SEED REPORT *from page 17*

lishes a tight turf.

The bad news

It's no secret throughout the Willamette Valley that this year's crop of fine fescue is down, perhaps as much as 50 percent in some cases.

"Fine fescues are way below average, maybe 60 to 65 percent of average," reports Pickseed's director of research Jerry Pepin. Adds Pickseed's Wiley: "You're looking at higher prices because the supply is less."

Notes International Seeds' Stalford: "Fine fescues are pretty short. Chewings and the reds—they've had a pretty bad year." Seedmen say hard fescues are also in short supply.

Demand for fine fescues doesn't appear to be as intense as it is for some of the other grasses. Prices shouldn't rise dramatically even in light of the shortage.

Curiously, the newer fields of fine fescue seem to be producing more, Wiley says.

Nelson of the Oregon Fine Fescue Commission cites a dry but not bone-dry period in May and early June as perhaps contributing to the short crop of fine fescue. He notes the fine fescues are also off significantly in Canada.

Demand for Jacklin's Logro fine fescue is not high, and the seed is available in adequate supply, reports Jacklin. "We just don't have that much demand as opposed to the demand for tall fescues and perennial ryegrasses," he says.

Blue bluegrass producers

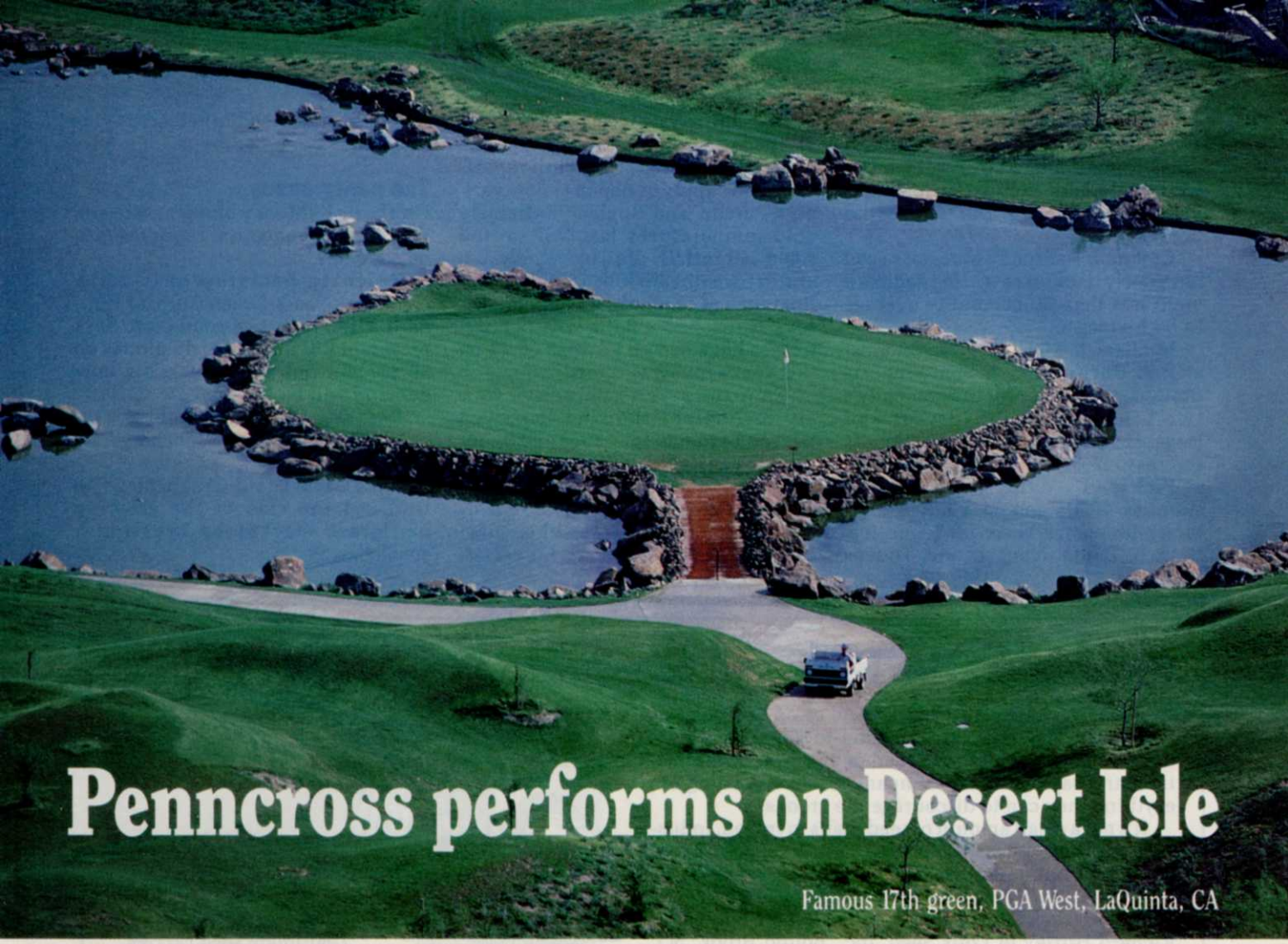
Jacklin Seed is perhaps best-known as one of the world's leading producers of Kentucky bluegrass seed, a favorite turf for home lawns, sports fields, golf courses, and commercial landscapes in most cool-season areas.

Unfortunately, look for less of it on your distributor's shelves than in past years. And what you do see will be higher priced than last year.

Reports indicate a 10- to 14-day hot spell in late spring (during pollination) in eastern Washington and northern Idaho—where most of the world's bluegrass seed is grown—took a toll on the proprietary varieties.

There is a chance that many proprietary bluegrasses may be sold out by early fall.

"Overall, we're down about 40 to 50 percent," reports Jacklin. "This makes three years in a row for us. The irrigated proprietaries are down by one-third. With the lack of carryover and demand way up, I just don't know if we'll have enough seed to see us through the season, which means you'll see more of the



Penncross performs on Desert Isle

Famous 17th green, PGA West, LaQuinta, CA

Penncross not only survives, but thrives on all 18 greens at this innovative Pete Dye designed course.

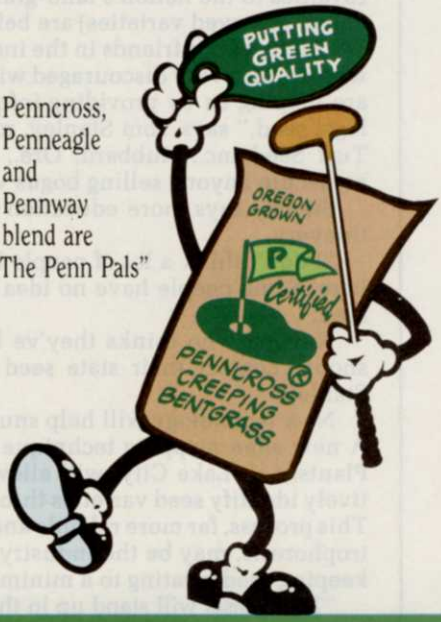
You've seen this awesome 17th green in pictures, or maybe you've had the good fortune of playing this 147 yard challenge, but we're reasonably sure you didn't know that it's Penncross creeping bentgrass. Television announcers won't tell you and magazines don't print it, but the putting greens that have made more champions on some of the greatest courses in the world are Penncross.

PGA West is a revolutionary new course with target greens, stadium spectator mounds and punishing hazards. Why would such an innovative designer use a strain of bentgrass that's been around for so many years?* We maintain that there is no better all-around bentgrass anywhere!

Some people say that bentgrass won't survive the intense sunbelt heat. We have evidence to disprove that notion. Penncross, and its Penn Pal, Penneagle have grown in popularity on courses from California to Florida . . . where bermudagrass used to reign.

Pete Dye specified Penncross for *this* desert isle, as he did for his famous Sawgrass island green in Ponte Vedra, Florida. Penncross is no ordinary putting green grass . . . and Pete Dye is no ordinary designer.

Watch Penncross perform in the *Skins Game* at PGA West, Nov. 29 and 30, 1986.



Penncross, Penneagle and Pennway blend are "The Penn Pals"

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common varieties used."

Jacklin's early pollinators—among them Nassau and Ram I—did fairly well while later pollinators—including Eclipse, Adelphi, and Glade—did poorly.

Common Kentucky bluegrass seed did poorly, Jacklin says. He predicts a yield less than 50 percent of average in both areas.

Michael J. McCarthy, agronomist at E.F. Burlingham & Sons, reports limited availability for the company's two proprietaries—Sydsport and Haga. He cites hot spring weather as the reason.

Pickseed's Wiley notes limited supplies of his company's five Kentucky bluegrass varieties (America, Bronco, Banff, Nugget, and Touchdown) but says production will be stepped up in 1987.

Northrup-King's Churchill reports a limited supply of Aspen (a new variety), Parade, and Rugby. "Extremely cold temperatures last fall caused some winterkill, plus extremely hot and dry weather in June inhibited pollination and seedhead development," says Churchill. "Both weather extremes have had an adverse affect on this year's bluegrass crop."

Churchill says Aspen, a sister variety to Adelphi showing improved heat and drought tolerance and better disease resistance, will be available in the fall.

John Zajac, vice-president of Garfield-Williamson, says another newcomer, Liberty Kentucky bluegrass, will be available in limited quantities this fall.

The bentgrasses

Unlike its Kentucky bluegrass cousin, the creeping bentgrass crop appears to be adequate.

Reigning bentgrass marketing champion Tee-2-Green Corp. of Hubbard, Ore., reports a good crop. Says president Bill Rose: "Production is up 50 percent but we don't know how demand will be."

Rose says the bentgrass outlook recently fell from "excellent to good" but is still positive.

Rose says Tee-2-Green plans to find out the size of the growing bentgrass market by creating a surplus.

Pirates on the high seeds

Anyone purchasing turfseed should be on the look-out for "pirated" products, according to some seed producers. Too much illegal seed is reaching the green industry, say legitimate companies, who are doing everything they can to discourage the crooks.

It's not a small amount of seed that's involved. Industry experts say perhaps more than a million pounds are being sold fraudulently.

"Pirated turfgrass seed has shown up in plain seed bags, with the claimed variety stenciled on," notes Dr. Richard Hurley of Lofts Seed, Inc., Bound Brook, N.J. "Legitimate seed producers and marketers package their product in a 'designer' bag, complete with variety logo, company name and Plant Variety Protection number. And legitimate bags will carry an analysis tag and a blue certified tag as proof of content."

In the case of "pirated" seed, not only is the turfgrass professional not receiving what he's paying for, but royalties to the nation's land-grant colleges (which develop improved varieties) are being denied.

"Many of our friends in the industry—the end users who are also very discouraged with the substitutions—are helping us by providing information about the illegal seed," says Tom Stanley, marketing manager for Turf Seed Inc., Hubbard, Ore., a company that will prosecute anyone selling bogus varieties of their seed.

Stanley says more education is needed to stop the thievery.

"I don't think a lot of people know what's going on here. Some people have no idea they're buying bogus seed."

Anyone who thinks they've been sold bogus seed should contact their state seed control official, says Stanley.

New technology will help snuff out the bootleggers. A new gene mapping technique developed by Native Plants, Salt Lake City, will allow researchers to positively identify seed varieties through DNA sequencing. This process, far more reliable and consistent than electrophoresis, may be the industry's foremost means for keeping seed pirating to a minimum.

"These tests will stand up in the court of law, and we intend to prosecute those found guilty of the illegal sale or misrepresentation of patented varieties," says Hurley.

"But, until the problem is solved, seed buyers can protect themselves and the industry," Hurley continues. Although bootleggers are becoming more professional in their packaging techniques, buyers should "be sure the seed is packaged in a logo bag, has the blue certified tag and an analysis tag. Anything else may be illegal and a misrepresentation."

In other words, *accept no substitutes.* □

Legitimate seed carries a blue certified tag as proof of content.

Richard Hurley of Lofts says new technology will help stop the bogus seed sellers.

Turf Seed marketing manager Tom Stanley notes buyers must be aware of the bogus seed problem.

MUSTANG

THE TALL FESCUE THAT LOOKS LIKE BLUEGRASS

KENTUCKY BLUEGRASS

MUSTANG TURF-TYPE TALL FESCUE

BLUEGRASS QUALITIES WITH TALL FESCUE PRACTICALITY

You'll quickly notice Mustang's finer texture, rich dark green color and dense, uniform turf—and you'll understand why we say Mustang has bluegrass-like qualities.

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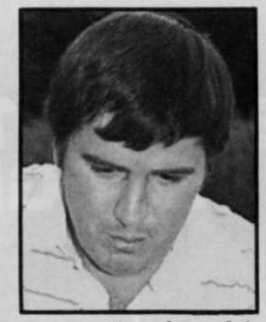
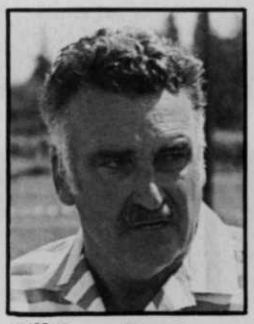
Doyle Jacklin, Jacklin Seed, reports yields of Kentucky bluegrass at 50 percent of normal.

Dave Nelson, Oregon Fine and Tall Fescue Commissions, says tall fescues are adequate in supply.



International Seeds' product manager Harry Stalford says the fine fescues are short in supply.



Bill Rose, Tee-2-Green president, reports a healthy crop of the bentgrasses.

Kent Wiley, Pickseed West, reports an adequate supply of perennial ryegrass seed.

"We're going to have a surplus. It's just a matter of whether it's this year or the year after," he reports. "Nobody knows the size (of the market). I've talked to a lot of people and they don't know."

Tee-2-Green sells about twice as much Penncross bentgrass as Penneagle. Pennway is another variety.

Pennlinks (PSU 126), "the Cadillac of putting greens," according to developer Dr. Joe Duich of Penn State University, should be available late this year.

Pennlinks 126 will be marketed by Tee-2-Green. More than 100 acres of the new variety, 13 years in development, were harvested in July and August.

Pennlinks can withstand a lower mower height and grows more upright, notes Rose. It is gray/green in color for contrast.

Other bentgrass marketers note an adequate to limited supply of the seed.

Seed Research of Oregon president Mike Robinson says a new variety—SR1020—will be available to golf courses for testing purposes this fall.

Turfgrass blends, report most seedmen, should be in good supply throughout the season.

And finally...

You've heard it before, but it should be repeated: buy early. Seed supplies, in general, are adequate but a still-thriving economy is putting a lot of stress on supplies.

You may want to visit the distributor who has been the most reliable over the years, who typically receives the most of the seed you desire. The chances are greater that he'll have the seed you need. **WT&T**

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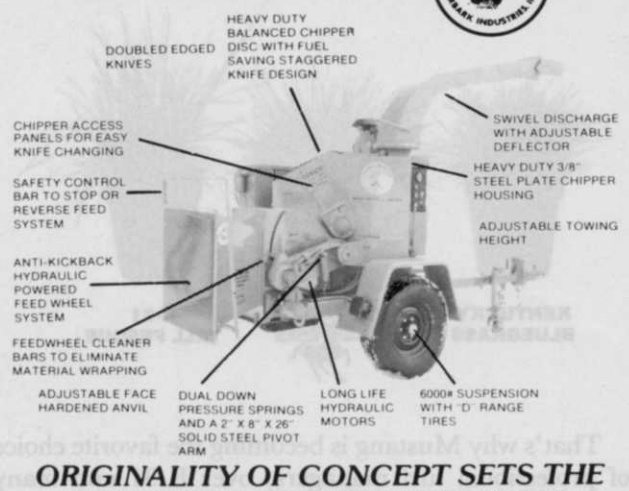
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THE RESORT BOOM

Two factors are spawning a growing market for resort living. They're both a result of a resurging economy.

First, it's becoming financially easier for families to take winter vacations and get away from the colder climes. Second, financial institutions are seeing this burgeoning market and sinking their reserves into resort construction.

The following three articles (Grand Champions, Sea Pines, and Horseshoe Bay) illustrate exactly how landscape construction and management is handled at the nation's leading resorts.

Though the financial rewards are great, managing the landscapes in this sector of the industry is not easy, as the following three profiles indicate.

An artist's rendering of what the Grand Champions Resort will look like upon completion late this year.

GOING ALL OUT

European design and lots of irrigation make the new Grand Champions Resort in Palm Springs a haven for travelers who want to escape winter.

Rae Price goes all out to bring authenticity to his landscapes. Even when that means visiting Europe.

Price, senior principal of Peridian Inc., Irvine, Calif., traveled to Spain to capture the Mediterranean look at the new Grand Champions resort in Palm Springs.

During the trip, Price and architect Tom McKinsey researched resorts throughout Spain. The result is a white plaster main building which provides stark contrast to the outside terraces flowing with bougainviella.

The landscape—concentrated groves of date palms, grapefruit, and olive trees—emphasizes the Mediterranean flavor. Price estimates he has used 150 30-foot date palms, 100 olive trees, and 75 mature grapefruit trees.

Price discovered a different attitude among the Spaniards about landscaping. "Their attention to detail and maintenance is rather unique," Price explains. "Many places have full-time resident gardeners making sure it's always presentable."

Price brought back that attitude along with his knowledge of Mediterranean landscapes. He's paying close attention to details as he puts the finishing touches on the ritzy resort, due to open Nov. 14.

The Palm Springs site is the first of four Grand Champions resorts being built. Peridian is also building one in the British Virginian Islands. The other resorts will be located in Hawaii and Spain. Sites for more resorts have already been pinpointed.

The Palm Springs resort consists of four parts. Although Price is using the same materials throughout the 15-acre site, each area is distinct.

First is the main hotel complex. Price describes it as a "low-profile hotel," with only five stories. He compares it with the Beverly Hills Hotel or Boca Raton in Florida.

The Villa area consists of five, four-unit buildings with one or two bedrooms in each. The Villas have a central courtyard and patio jacuzzi/spa area. They are serviced by the main hotel.

The Grand Champions Club is a private club and restaurant facility.

The club has one celebrity tennis court surrounded by a dining area. Members can play on seven concrete tennis courts, two clay courts, or two grass courts. "We wanted to provide variety for our members," Price says. "The lawn courts will be a pleasant surface in the desert heat."

Grand Champions Club uses a formal European design. Mature grapefruit trees, trunks painted white to protect them from sunburn, are planted in matched pairs. Hedges—including boxwood, myrtle, and trivot—and flowers—primarily vibrantly-colored petunias—round out the landscape. Price travelled to Mexico for paving materials.

The fourth area of the resort is the 10,000-seat sunken tennis stadium, which will be home to the

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Rae Price travelled to Spain to research resorts before beginning work on the Grand Champions in Palm Springs.

Pilot Pen Classic in February.

A 36-hole championship golf course, being built by the city of Indian Wells, will be nestled into the resort. The course is a Ted Robinson design.

The suffocating heat last summer forced Price's crew of six to start work at 4:30 a.m. Record-breaking temperatures of up to 117 degrees also placed a lot of stress on plant materials, making transplants difficult.

Because of the heat, about 12 of the 15 acres are irrigated. Still, to further protect the trees, Price's staff placed "bubblers" at the base of each tree.

"We got about 25 percent of our plant materials from southern California nurseries so we wouldn't have a problem with their acclimation to the heat," Price says.

But by the time Grand Champions opens, the mercury should have fallen to normal levels. The resort is intended to be a luxurious escape for people fending off the approaching winter blues. **WT&T**

TURBULENT SEA PINES

From lawsuits to hurricanes, the landscape at Sea Pines Resort on Hilton Head Island has nonetheless withstood the test of time.

Perhaps the most recognized part of Hilton Head Island is "Liberty Oak," with Harbour Town's candy-striped lighthouse in the background.

The headline in the *Savannah Morning News* reads: **Charles Fraser Files 3 Lawsuits Against Sea Pines' Owners.** Those who live on Hilton Head Island aren't surprised.

It's not the first time Fraser, founder and developer of Sea Pines resort area, has sued. The battle began in 1983 when Sea Pines area merged with the Hilton Head Co. and was sold the next year to Rolyat, a south Florida lending institution.

During the Governors' Conference in August, the island tried to cover up $100 million in lawsuit claims filed during an eight-month period.

The suits involve property sales and corporate decisions affecting almost half of the island's 25,000 acres.

Sea Pines, the island's oldest resort, (planning began in 1950) has 5,280 acres of developed property. But Gale Smyly, Sea Pines' landscaping director, hasn't seen his million-dollar budget suffer because of the debates.

The resort has, however, admittedly suffered from this summer's drought and three hard winters in a row. But only a true expert could pick out any flaws in Sea Pines' picturesque setting at the tip of Hilton Head Island.

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The highest standards

"In the resort industry, you have to do a lot of volume to turn a profit," says Smyly, who has been with the company for 14 years. "Particularly here on Hilton Head Island, you have to have a very high standard for the final product—from your landscape management to fine china."

Despite his respect for the current management, Smyly remains in awe of Fraser, the man who at age 21 had a vision of Sea Pines as a thriving resort.

Pointing to perhaps the most recognized part of the island, the large oak tree called "Liberty Oak," with Harbour Town's candy-striped lighthouse in its background, Smyly explains that it took an extra $60,000 from Fraser to save the tree when the harbor was developed.

"Charles Fraser had a photographic, projective mind," Smyly says. "The way the buildings are set in conjunction with the landscape...there's no negotiation there between man and nature. It all just comes together."

And it's Smyly's job to keep it together. During the resort season, which runs from March 1 to Sept. 1, Smyly and his summer staff of 48 (it dwindles to about 25 in the winter) are responsible for more than 300 acres: villa properties, clubhouses, the Hilton Head Inn, restaurants, and Harbour Town village.

Villa management produces revenue which supplements the regular budget. But Smyly calls it a thankless job. "There are 5,000 property owners who all have their own green thumbs and their own direction to follow," he says.

The four golf courses in Sea Pines are maintained by others although Smyly occasionally helps out a superintendent. (One time, his crew had seven days to plant 1,000 azaleas on a course before a big tournament.)

Varieties of turf

Although Charles Fraser is the vision behind the resort, landscape architect Robert Marvin designed many of the areas. The Greenery, a local landscape contractor, did most of the original installations.

Turf on the island consists of the three major warm-season varieties: hybrid bermudagrass, centipede, and St. Augustine. "Centipede is a hardy grass," explains Smyly. "The golf courses use bermuda for its aestheic value, and St. Augustine grows well under the shade of the large oak trees."

Besides oaks and live oaks, characterized by willowy branches drooping over roads, the island's most abundant trees are palms. Ornamental pampas grass adds a tropical look to many of the villas. It also helps naturally control erosion.

Some native plant materials haven't survived the recent harsh winters. "We've had to redirect our thinking to late-blooming materials," says Smyly.

Unusual weather still doesn't weigh as heavily on Smyly's mind as does the threat of a hurricane. Hurricane David in 1979 forced evacuation of the island. "It's like Russian roulette," he says. "Eventually it's going to happen."

—Heide Aungst

A COOL BREEZE IN TEXAS

One of the reasons for the popularity of Horseshoe Bay is the ample water supply, a pleasant change from other Southwestern resorts. The 16th hole at Applerock, one of three courses at the resort, provides a picturesque setting.

Draw a mental image of south central Texas. Include cacti, tumble weed, dust, and pancake-flat prairie stretching as far as the eye can see.

But some Texans just north of Austin have a secret oasis—a place that looks more like Eden than Tombstone Gulch. Tucked into 50 miles of rolling, fertile green hills is a series of sparkling channel lakes, beginning with Lake Austin and ending with Lyndon B. Johnson Lake in Marble Falls. Alongside "Lake LBJ," the striking beauty of this unexpected hill country reaches its pinnacle at Horseshoe Bay Country Club (HBCC) Resort, where you can follow roads like "Bay West," and "Smuggler's Cove."

"The hills and the lakes definitely set us apart from most Southwestern resorts," says Alan Houdek, the HBCC director of golf course and amenity grounds maintenance. "But we have some other things we're proud of here that keep people coming back year after year."

When HBCC opened in 1971 on what was previously the Coca-Cola Ranch, it was primarily a yacht club, marina, and riding stables. Today, additions include 14 tennis courts (four under a dome) and 54 golf holes. The 4,600-acre resort is the largest Robert Trent Jones-designed complex in the continental United States.

And golf is the drawing card. "Our primary clientele are the retirees who own homes here," Houdek says. "They live here because of the golf."

Another factor is the resort's aesthetic appeal—the kind of appeal that involves hard work and expert care. Owner Norman Hurd favors Oriental influences in the landscape: statues, fountains, and sculptured ornamentals.

Torrid Texas winters

This year is Houdek's 13th at HBCC. He's experienced some challenges the past few years.

Two years—1984 and 1985—were entirely out of character for south central Texas' climate. Both years,

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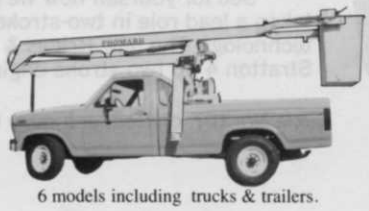

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LANDSCAPE PROFILE *continued*

Alan Houdek maintains his Penncross bentgrass greens at 5/32-inch.

brutal winter temperatures caused damaging freezes. "In '84, we had about two weeks of sub-20's temperatures," Houdek remembers. "The next winter wasn't quite as bad, but between the two, we lost all of our 50-foot palm trees."

Each of the three courses has at least 10 holes with water hazards. The tees are Tifdwarf bermuda, the fairways Tifway bermuda, and the greens Penncross bentgrass maintained at 5/32 of an inch.

'We're privately owned, and I prefer it that way. We get the pride of knowing it's our course done our way.'

—Alan Houdek
Horseshoe Bay C.C.

"We were one of the first to use Penncross in this part of the country," Houdek says. "For quite some time, we were the most southerly course in the nation using it."

Houdek controls a light grub problem by applying Oftanol insecticide once a year.

The more difficult problems are turf diseases associated with the same weather conditions—moist lake air and balmy temperatures—that draw people to Horseshoe Bay. Houdek says that he has applied 2¾ pounds of Bayleton per acre every three weeks during the warm season for the past three years, and it has kept dollar spot from being "much of an issue."

A fast fungicide

The primary disease, Houdek says, is brown patch. "It's just a predictable, consistent disease in this part of the country from May through October," he says. "There are a number of chemicals with comparable prices that can control it, but Dyrene fungicide is the fastest I've tried."

He alternates the Dyrene with Scotts Fluid Fungicide, which also gives him satisfactory results.

Houdek is thankful for the independence his job at Horseshoe Bay gives him. "We're privately owned, and I prefer it that way," he says. "We care about the members' opinions, but we still get the pride of knowing it's our course done our way.

"I run a pretty tight ship, and I know the owner is happy with what his money is getting him."

Houdek predicts almost 100,000 rounds next year. Within 10 years, he predicts the resort to be within Austin's rapidly expanding boundaries. That means the number of retirement and second homes around Horseshoe Bay will multiply rapidly.

"And then," he says, "the secret will be out." **WT&T**

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Circle No. 102 on Reader Inquiry Card

COMING BACK

A pest of the past, the green June beetle, is once again causing headaches for many in the Eastern United States. The pest was silent for 30 years.

by Ruth S. Salvaggio and Dr. John L. Hellman

The green June beetle is making a comeback.

The pest, *Cotinis nitida L.*, has increased so much in numbers the last several years that it is now common in turf of the eastern United States.

A native from Massachusetts to Kansas and south to Florida and Texas, the green June beetle caused severe damage to the Capitol grounds in Washington, D.C. around 1880 (Chittenden and Fink, 1922).

It continued to caused damage to turf, tobacco beds, and vegetable crops for several decades (McKinney and Milan, 1926).

In the last 30 years, it has received little notice except when the adults fly in July. Today, the green June beetle population has increased once again and is causing damage from Long Island to the Carolinas.

A closely related species, *Cotinis texana* Casey, shares the same common name but is dominant only in the southwestern states (Ritcher, 1945).

The green June beetle grub crawls on its back, is about the same width along its entire body length, and has stubby legs when compared to other white grubs.

Identification

The green June beetle adult, usually 3/4 to 1 inch long and 1/2 inch wide, is usually forest green on the top, and may or may not display lengthwise tan stripes on the wings.

Its underside is metallic bright green or gold, bearing legs with stout spines to aid in digging.

In Maryland the names "June bug" and "June beetle" are commonly used for this insect. However, do not confuse the green June beetle with the familiar brown May or June beetles that fly toward light on summer nights. The green June beetle adult flies only during the day.

Only the immature or larval form of this beetle causes damage to turf. The larvae are white grubs with three growth stages and are similar to those of many other scarab species.

Their body lengths reach 1/4 inch, 3/4 inch, and 2 inches, respectively. The larvae have stiff abdominal bristles to gain traction.

Other typical white grubs, like the Japanese beetle grub, are narrower, have longer legs, and crawl right-side up.

The life cycle

The green June beetle completes one generation each year. Adults begin flying in June and may continue into September. The peak number of adults occurs in a two-week, mid-July period in Maryland and Virginia.

On sunny days, adults fly over open grassy areas, while at night, they rest in trees or beneath the turf's surface.

Green June beetles are frequently mistaken for bees because their wings emit a "buzzing" sound as they fly. The adults are attracted to flowers and feed on the sap of trees, apparently causing no damage.

They are attracted to fruit and are known to attack soft-skinned fruit such as figs, peaches, grapes, and apricots. Hence, in southern states, they have been dubbed "fig eaters."

The adult female releases a pheromone which attracts males around her on the ground or on lower limbs of trees and shrubs. Males often fly low over the grass trying to locate females.

After mating, females burrow 2 to 8 inches into the soil to lay some 20 eggs at a time. Females are attracted to moist, sandy soil with high organic matter but are found in several other soils.

Historically, grub infestations have stemmed from piles of manure which were spread for fertilizer. However, in more recent times eggs and grubs may be in mulch that was exposed during the egg-laying period.

The incorporation of composted sewage sludge products and other organic materials have made many sites more attractive to and favorable for these beetles.

Most eggs hatch in late July and August, and by the end of September, most are third stage larvae.

The larvae feed on dead organic matter in the soil and thatch, as well as on living tissue. The grubs remain active into November in Maryland. In most southern states grubs may be

Salvaggio and Hellman work in the Dept. of Entomology at the University of Maryland.

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A golf course tee damaged by the green June beetle. Notice the difference between the grass on the tee and the grass in surrounding areas. Grass cut at a greater height is less stressed and damage is less visible.

TABLE 1

Chemicals for Control

Formulation	lbs. AI/A		Label Rate/ 100 sq. ft.
	Lowest	Label	
Sevin 80S	6.0	9.0	4.0 oz.
Diazinon 4EC	2.0	5.5	4.0 fl. oz.
Proxol/Dylox 80SP	---	8.0	3.75 oz.
Turcam 76WP	2.0	4.0	2.0 oz.

come active on warm winter nights.

In colder areas they overwinter as third stage grubs in burrows 8 to 30 inches deep. They resume feeding once the ground warms in the spring and change to pupae after a few weeks.

In Maryland, pupation occurs in late May or early June. The adults begin emerging about three weeks later.

Damage to turf

The green June beetle grubs differ from other white grubs by their unusual habit of tunneling, which damages turf.

Smaller stage grubs tunnel in the top four inches of the ground, loosening the soil, eating, and thinning the thatch. In Maryland, this starts in early August when the disturbed grass may wilt or die if conditions are dry. The damage is not obvious when grub density is low or if the grass receives ample moisture.

As the grubs grow, they burrow deeper, creating more severe damage. Tunnels to the surface are kept open and the grubs push little mounds of loose soil—similar to earthworm castings—to the surface.

To determine whether a mound was made by a green June beetle grub, wipe the mound away and feel for a hole about as wide as a finger. Fecal pellets may also be present. Fresh activity is especially visible after a heavy rain.

The mounds and holes are visible by mid-August but the damage becomes more pronounced in following months as grubs continue to grow.

The grubs do feed on some roots but the major damage to the turf is due to the upheaval of the soil and dislodging of roots from the soil.

The green June beetle grubs, especially third stage grubs, come to the surface at night to feed and may at times, "graze" on the turf. Grubs may also be found in the twilight hours and on overcast days.

Their trails through dew are frequently seen on golf course greens. The mounds and holes disfigure turf while the tunneling kills the grass. Drought-stressed turf and grass that is cut very short succumbs easily to this damage.

Grass cut at a greater height is less stressed and the damage is less visible.

Grass species with broader blades—such as tall fescues—hide damage better than fine-bladed grasses such as ryegrasses, bentgrasses, and red fescues.

These grubs also cause indirect problems. Spaces open up as the grass dies, allowing for weed encroachment. Turf managers using reel mowers say the loose soil from the mounds accumulates and dulls the cutter blades especially when dew is still on the grass.

Additionally, predators—small animals and birds—damage turf as they dig for the grubs.

Biological control

Today there are no effective biological agents available to control this grub.

The most common parasite, a type of digger wasp (*Discolia dubia* Say.), captures a grub, brings it into the nest, and lays an egg on it. The resulting larva feeds in the grub, eventually causing death.

In 1985, many golf course superintendents reported a higher number of digger wasps around sand traps, a direct result of more green June beetle problems.

Though these wasps help reduce the grub population, they cause fear because of their stinging tendencies.

Milky disease products, effective against Japanese beetle, do not control green June beetle grubs. *Bacillus thuringiensis* Berliner products have no effect on white grubs.

Control recommendations

To prevent damage to turf, one must apply controls to grub stages before many mounds are evident. Damage should be expected if high grub populations were present the previous year or control was inadequate.

An increase in adults from the previous year is an indication to expect damaging populations.

One can determine density of grubs in August by digging a square foot of soil four inches deep and counting the number of grubs.

After mid-August, samples should be 10 inches deep to find the larger grubs. If more than five grubs per cubic foot are present, control is necessary.

Insecticides are effective on all grub stages and applications are warranted anytime between August and September, provided damaging numbers remain active.

Spring chemical applications are not generally recommended since the grubs are active just a few weeks and

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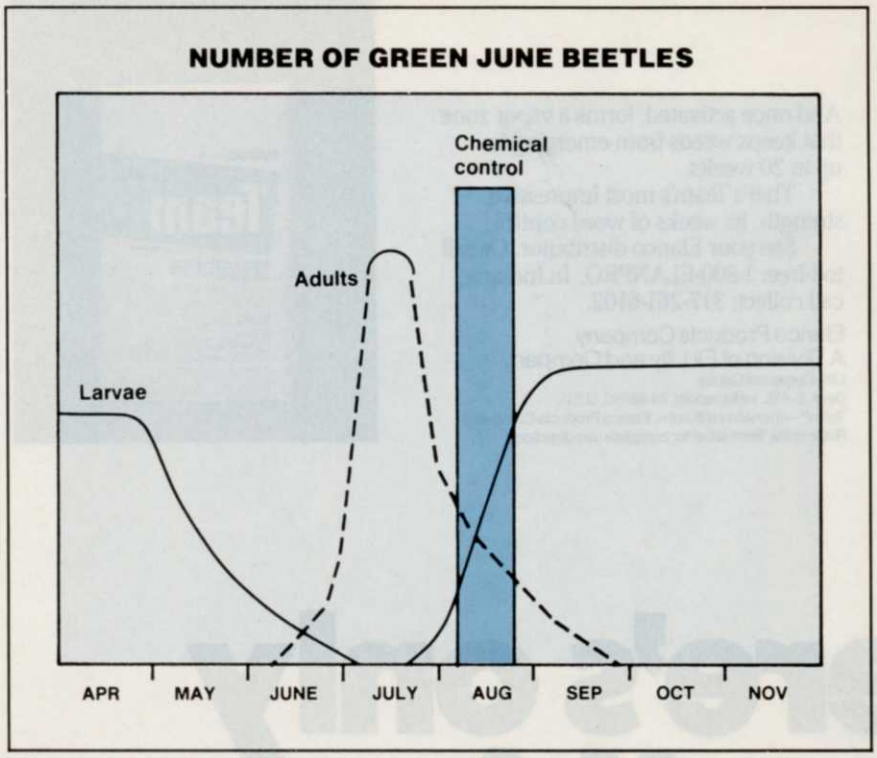

The green June beetle life cycle showing the period to apply chemical controls in order to prevent turf damage in Maryland.

many more may have pupated by the time damage is obvious. Once the grubs reach the third stage in August or September, they migrate freely and can easily move from an infested area to an adjacent area.

To protect golf course greens, treat the greens, collars, and a few yards beyond the collars. Insecticides which also control sod webworms, cutworms, and armyworms may be selected.

If fairways are treated, the rough areas should be spot-treated where there are high grub populations. The highest grub populations are likely to be found where the adult beetle population was most concentrated.

The green June beetle grubs are effectively controlled by a number of insecticides labeled for grubs (see Table 1). Even insecticides that do not penetrate the soil work well because these grubs come to the surface and are exposed to the materials.

Sevin and Diazinon are consistently effective in controlling the green June beetle grubs and both are registered for homeowner use. Proxol and Turcam also provide good control.

Application of these insecticides must be immediately followed by irrigation with ½ inch of water, or timed with rainfall.

In Maryland, spring applications of Oftanol have not effectively controlled the green June beetle grubs. Late summer applications of Oftanol also failed to provide adequate control of these grubs within one week. However, tests will be continued to investigate Oftanol grub control over longer time periods.

Turfgrasses recover from damage significantly once stress factors are removed. For example, species with stolons and rhizomes may repair the damage once the grub population is controlled.

The damage resulting from the grub tunneling is less severe when grass receives sufficient moisture.

A word of caution to those treating for green June beetles: they come to the surface and die, causing a foul odor as they decay.

Turf managers have not found poisoned birds after applying chemicals to control these grubs but it may be wise to consider it a possibility and be watchful.

Finally, monitor treated areas carefully because migrating grubs may reinfest once the chemicals have broken down. It may be necessary to retreat some areas to protect them from damage. **WT&T**

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Rolling hills pose a barrier to efficient water use at Palo Alto Hills Country Club. But Mike Garvale has an answer.

GIVING WATER A HELPING HAND

Two golf courses on the West Coast find a handy tool for helping conserve a precious resource, saving big bucks at the same time.

Yes, water conservation is important during especially dry years, as the East Coast and Southeast have learned the past two summers. But, no, conservation shouldn't be stopped during years in which the rainfall is normal.

Managing water regardless of availability can mean a big cost savings, as well as conservation of our precious resources, facts that haven't gone unnoticed by two California golf course superintendents.

Improving root systems

The goal of Mike Garvale, golf course superintendent at Palo Alto Hills Country Club, is to reduce water use on the 125-acre course by 25%. That would slash nearly $19,000 from the club's $75,000 annual water bill.

Garvale, who came to Palo Alto from northern Michigan in October, 1984, took the first step in his conservation program by building deeper root systems to improve moisture utilization. "When I started here, it was after the hot summer months and I found very little root systems on the fairways," he explains. To remedy the situation, he double-aerified and verticut, and then applied three pounds of potassium nitrate per 1,000 sq. ft.

The fairways, which are primarily annual bluegrass (poa annua), responded well over the winter months. Going into summer, root systems were as deep as three inches or more. Garvale started his regular watering cycle the first of April. Now he feels that he's maintaining a course that will help him meet his goal of 25% less water use.

Built on 90% adobe clay and rock, the 25-year old golf course presents several challenges to efficient water management. Rolling hills "draw down water" and large oak trees surrounding greens also siphon off moisture.

Frequent sampling

According to Garvale, taking daily core samples to analyze moisture levels is the biggest water saver. Regular use of an effective soil wetting agent is also important for overcoming barriers to efficient water use, he adds.

His first experience with a wetting agent was in 1972, when he worked on a Detroit area golf course while still in college. "We applied Aqua-Gro to treat isolated dry spots," he says. That's the same product he now uses at Palo Alto Hills Country Club.

Soil wetting agents primarily work by loosening the bonds that hold water molecules together, which often hinders uniform water penetration and thorough drainage.

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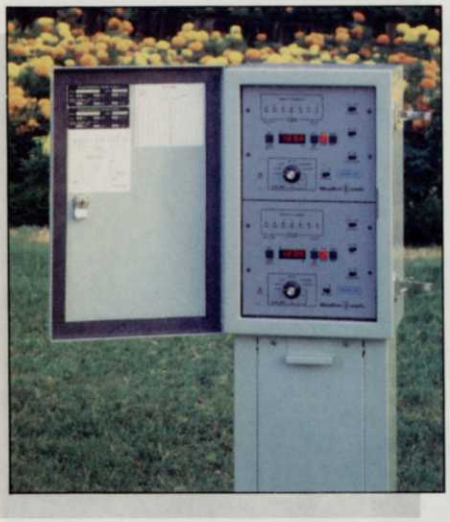

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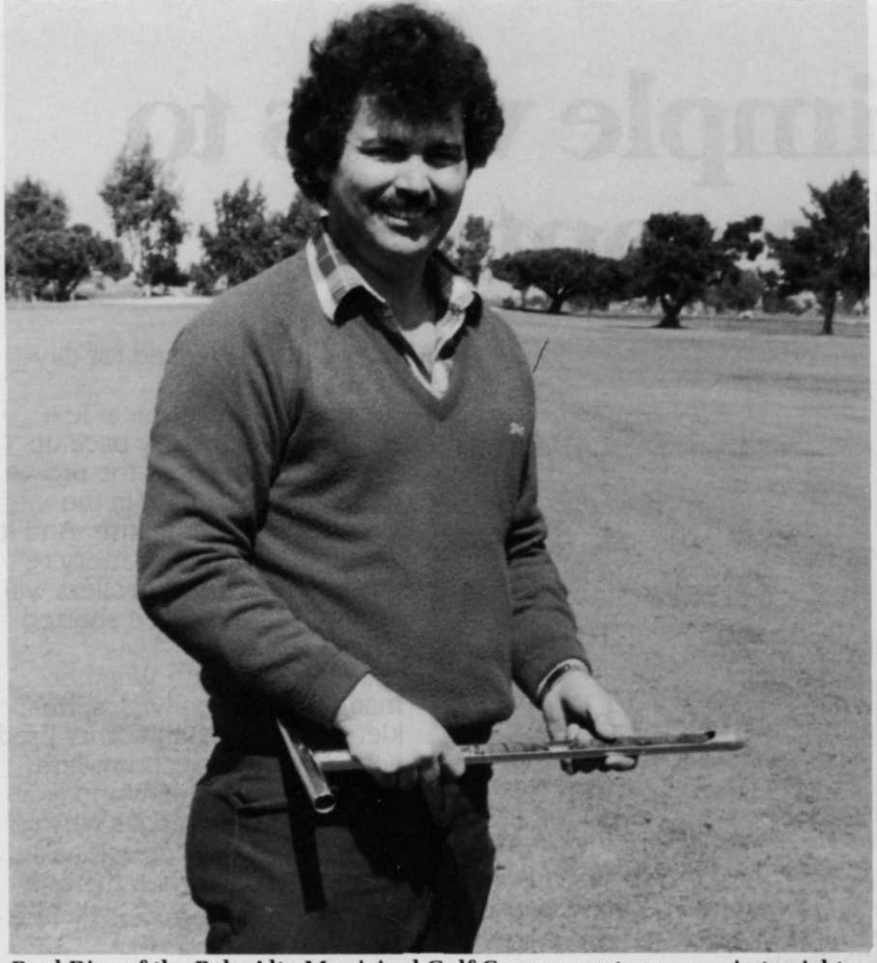

Paul Dias of the Palo Alto Municipal Golf Course must manage six to eight inches of thatch on fairways.

than 20% of total rainfall actually became root zone moisture. The high losses were due to runoff and evaporation.

Garvale notes that wetting agents are often used to improve water penetration on heavy or compacted soil or turfgrass with excessive thatch. What many people overlook, he believes, is that a wetting agent can also be "used to dry down wet soils."

At Palo Alto Hills, he adds, the use of a wetting agent has been especially helpful in controlling runoff on hillsides.

Significant savings

Wetting agents can save significant amounts of water as well as labor if properly used, says Paul Dias, superintendent and manager of the Palo Alto Municipal Golf Course. Built on "mud fills" next to San Francisco Bay, the 200-acre course has as much as six to eight inches of thatch on fairways, which poses a serious barrier to efficient watering and water utilization.

About four years ago, recalls Dias, high winds and compaction caused a severe drying out problem. It prompted "a lot of hand-watering" to supplement normal irrigation, which is supplied by automatic sprinklers. The next year, Dias started a monthly application program with Aqua-Gro and reduced hand-watering by about 50%.

Dias, who has used wetting agents for 20 years, says he can cut overall water use by 25% the first week after the product is applied. Wetting agents have residuals of about 30 days, he adds, and have been used to control dew on greens in winter.

Unique situation

Though he's located only a few miles from Garvale, Dias cares for a course that is totally different.

It's below sea level and there's no drainage, so "overwatering will turn it back into a mud flat." Annual rainfall is approximately 20 inches, with the bulk of precipitation falling from November to March.

In March, Dias normally starts a seven-day watering schedule, operating his irrigation system from 8 p.m. to 7 or 8 a.m. "We need to provide enough water to overcome salt, but we can't leach it out," he notes.

Watering cycles average eight to ten minutes on fairways and six to eight minutes on greens. The facility is open year round and logs 104,000 rounds of golf per year.

Palo Alto is in the heart of the Silicon Valley's high tech industry. It's municiple course employs eight fulltime greenskeepers. Annual revenues are $1 million.

One thing Dias shares with Garvale is a desire to cut water use. Annual cost at the municipal course is about $80,000, a figure Dias believes can be slashed by 20%. Like Garvale, he says the best moisture management tool is to take frequent core samples.

The other management tool is the use of a wetting agent—monthly on greens, Seaside bentgrass fairways at both courses are also treated. The non-ionic wetting agent is applied with a sprayer and watered into the soil.

Dias is currently investigating a special injector to automatically apply the product through irrigation water. The Palo Alto Municipal Course has no electrical hookup for its irrigation system, so the standard injector system can't be used.

Different applications

At Palo Alto Hills Country Club, Garvale uses a "Little Squirt" injector to meter the wetting agent into irrigation water.

First, he uses a sprayer prior to the irrigation season to "establish a base," applying 2¼ gallons of product per acre. He then switches to a "maintenance program" with the Little Squirt injector.

The labor-saving device is used to apply three ounces of Aqua-Gro per 1,000 sq. ft. every 10 to 14 days, as needed. Garvale's regular watering program for fairways and greens usually consists of two, ten-minute sets. There's a three- to four-hour interval between sets on fairways and a two-hour interval on greens.

Based on his experience with wetting agents, Garvale advises anyone starting a program to "use them like a pesticide. The main thing is to read the label directions and contact the manufacturer if you have any questions."

If you also use the wetting agent to improve efficiency of pesticides or fertilizers, he adds, "make sure it's compatible with the other chemicals." He feels it's a "good idea to make a test application and wait at least one week" to see if there are any adverse effects.

Golf course superintendents like Paul Dias and Mike Garvale, whose courses are located in a region that experienced severe drought conditions in the past, realize that water can't be taken for granted any more. Using available technology, they've adopted a practical approach to managing their water that is not only improving the efficiency of their respective operations, but enhancing the playing conditions of their golf courses as well. **WT&T**

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To learn more about our compact utility tractor line, or the name of the dealer nearest you, call 800-447-9126 toll free (800-322-6796 in Illinois). Or write John Deere, Dept. 79, Moline, IL 61265.

Or better yet, why not go and check out a hydrostatic tractor for yourself. You'll get attached to one in no time at all.

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The Square Fountain Garden shows that the quality of horticulture displays hasn't been reduced due to the IPM program.

AN ALTERNATIVE

Integrated pest management is drawing raves from Longwood Gardens in Kennett Square, Pa., where some 350 acres are being effectively managed.

by Donald R. Buma, Longwood Gardens

Integrated pest management (IPM) is a current and often-discussed approach to controlling pests.

IPM is a program consisting of:

(1) closely monitoring plants and insects to determine their stage of development and pest severity;

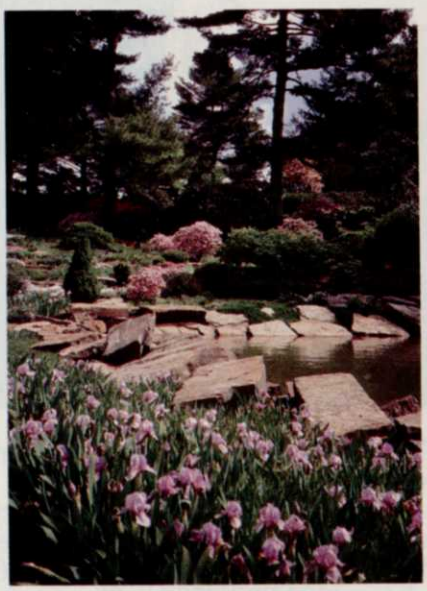
(2) if necessary, implementing a correctly timed plan of action to control the pest with a biological or least-toxic chemical and;

(3) evaluating whether the desired results were achieved and readjusting the control plan if appropriate.

IPM has worked for several commercial landscape/arborist firms and has been used successfully with a number of agronomic crops.

Longwood Gardens in Kennett Square, Pa., has instituted a landscape management plan of pest control management based on an in-house staffed IPM program.

Donald R. Buma is a horticulturist at Longwood Gardens.



Low level pest populations were treated in areas such as the Hillside Garden with short-lived pesticides.

Goal: no quality loss

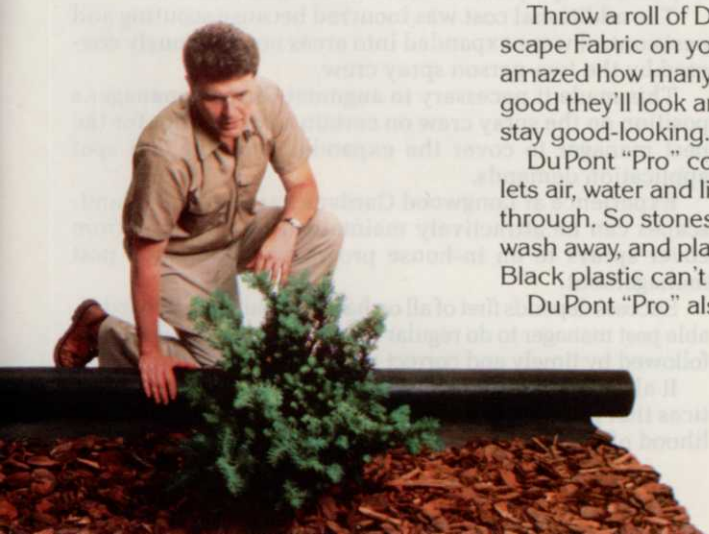
Longwood Gardens consists of 1,000 acres, 350 of which are intensively managed as horticultural display gardens and conservatories. These displays attract more than 700,000 visitors each year.

A reduction in the amount of the more toxic pesticides was of primary concern, both from a visitor safety and environmental standpoint. It was imperative that there be no reduction in the horticultural excellence of the displays when pesticide use was reduced.

In short, the goal was to use fewer pesticides while maintaining or improving the quality of the garden displays.

To accomplish this goal, we needed to find a person highly trained in the principles of integrated pest management and familiar with the

And you thought Du Pont Landscape Fabric was just for weed control



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Comparison of some chemicals used			
	1984 (Pre IPM)	1985	Difference
Insecticide A	120 lb.	0	−120 lb.
Insecticide B	83 gal.	17 gal.	− 67 gal.
Fungicide A	126 lb.	45 lb.	− 52 lb.
Miticide A*	50 gal.	5 gal.	− 45 gal.
Insecticide C	28 lb.	0 lb.	− 28 lb.
Insecticide D*	19 gal.	5 gal.	− 14 gal.
Insecticide E*	34 gal.	21 gal.	− 13 gal.
Insecticidal Soap	0	75 gal.	+ 75 gal.
Horticultural Oil (Dormant and Summer)	285 gal.	973 gal.	+607 gal.
*These chemicals used in areas not completely included in IPM program			

practices of pest control. A pest manager had to be present in order to identify pests and plan, coordinate, and ensure proper follow-up of control procedures.

Prior to IPM implementation, the spray crew consisted of two on-the-job-trained employees who applied cover sprays based on calendar date and general plant examination. It now consists of a spray applicator and the pest manager.

The pest manager position developed through the upgrading of a vacated post. There was no increase in personnel.

With the addition of the pest manager, a regular inspection (scouting) schedule was established. We now apply pesticides based on need rather than calendar date and past records.

Pesticides are used only if population levels warrant application.

The pest manager scouts all garden areas once every one or two weeks. By checking individual areas regularly, low level pest populations are detected early and are treatable with relatively non-toxic, short-lived pesticides, such as insecticidal soaps and horticultural oils.

In addition to the positive environmental and human benefits of less-toxic pesticides, a major pest management-related advantage exists: insecticidal soap and horticultural oil do not have as harmful an effect on beneficial insect predators as do the more toxic chemicals.

The resulting increases in beneficial insect populations, which control insect pests, may significantly reduce the need for applying additional toxic chemical controls in the future.

Pests down, quality up

To date, the IPM program is meeting the originally stated goal of using fewer toxic pesticides (see table above) while not reducing the quality of the horticultural displays.

We have actually increased the quality of the horticultural displays. This is because regular scouting enables sprays to be applied at the optimum times for best coverage and control.

Also, scouting identifies many potential pest problems before any significant damage occurs. There has been additional indirect cost with the IPM program but with the improved displays, it has been more than recovered.

The additional cost was incurred because scouting and pest control were expanded into areas not previously covered by the two-person spray crew.

This made it necessary to augment the pest manager's position on the spray crew on certain days in order for the pest manager to cover the expanded scouting and spot application demands.

Experience at Longwood Gardens has shown the landscapes can be attractively maintained by changing from cover sprays to an in-house program of integrated pest management.

Success depends first of all on having a trained, knowledgeable pest manager to do regular landscape inspections that are followed by timely and correct pest control measures.

It also depends on proper plant care and cultural practices that promote good plant health and reduces the likelihood of pest problems that need to be managed. **WT&T**

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Network 8000 accomplishes all of this by combining a computerized central controller with satellites of amazingly extensive stand-alone capabilities.

The central controller utilizes an IBM "XT" personal computer as the hub of the operation, including keyboard, color monitor, matrix printer and a light pen for easy access to all functions.

This non-dedicated central is capable of "transparent" multiple function, which provides for *simultaneous* business and irrigation program operation. It's like getting two important pieces of equipment for the price of one!

Network 8000 provides automatic adjustment of irrigation system operation, responding to such key factors as rainfall, evapotranspiration rate, plant materials, soil types, soil compaction, geographic location, terrain slope, Ph factor and system design. A manual override is provided for all factors

The central programmer will operate any station, set the running time, assign it to any program and set up to three repeats for any station. It can operate up to 800 satellites of 32 stations each, for a total of 25,600 stations.

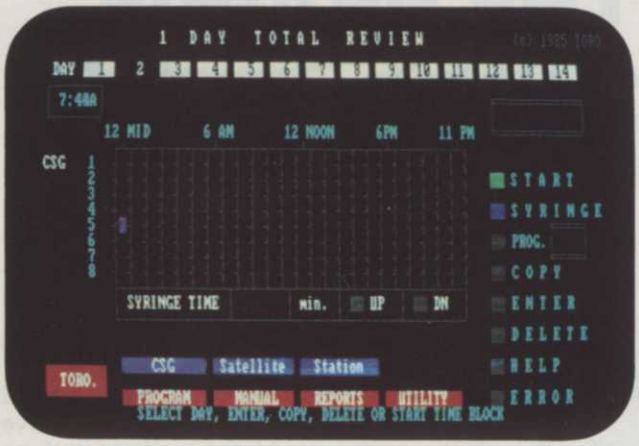
Toro's new Network 8000 central provides two-way communication: "down-loads" information to the satellites, and "up-loads" information from the satellites.

Also, with this central station you enjoy the advantages of water-budgeting by means of percentage increase/decrease control (by station, by program, by CSG, or the total system), from 1% to 900%.

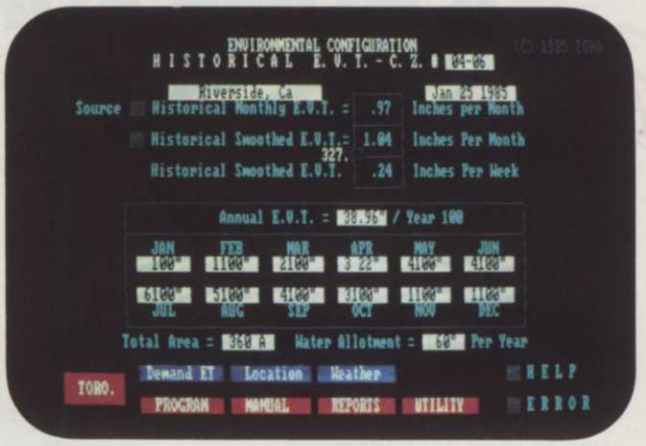
But this is only the beginning of the story. You have to see it perform to fully appreciate exactly what it can do for you and your irrigation. Call *The Man from Toro* for a no-obligation demonstration.

Key components to Network 8000 are the IBM "XT" personal computer with color monitor and keyboard, operated with handy light pen. Shown in the middle is Toro's Delay & Distribution Unit. And on the right, the IBM matrix printer and stand.

TWO TYPICAL SCREEN DISPLAYS



This screen quickly displays complete irrigation program for one full day, for each of 14 days in the system.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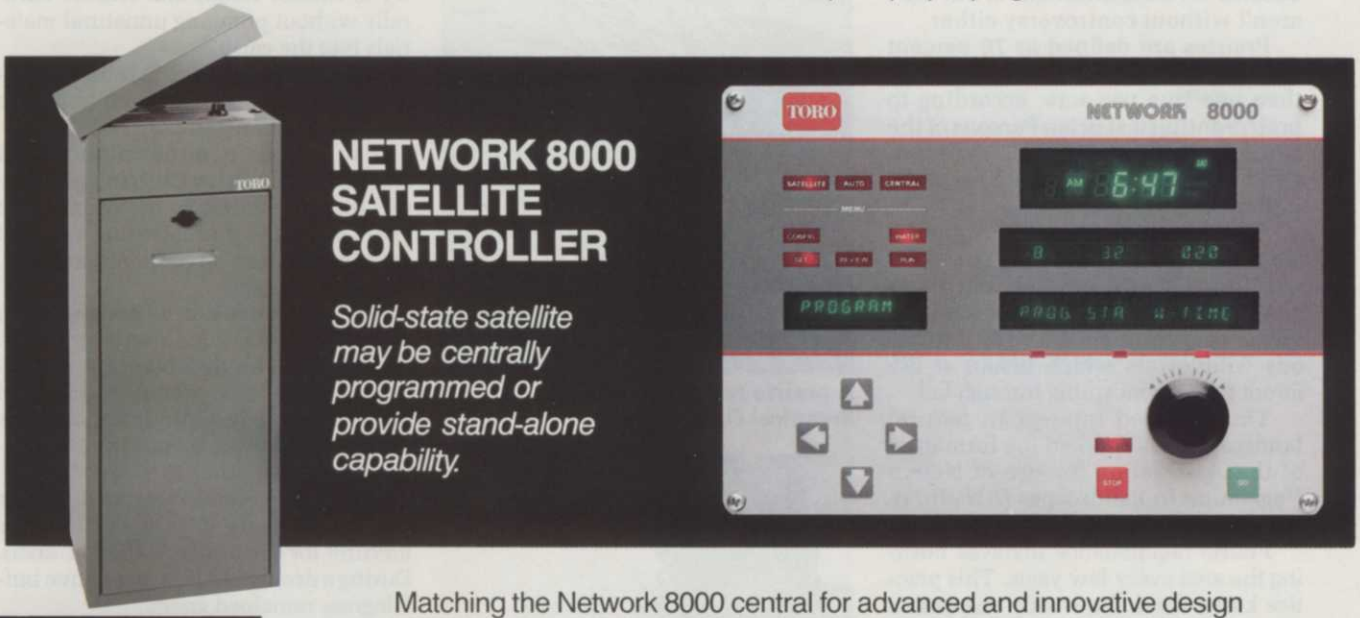

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Matching the Network 8000 central for advanced and innovative design is Toro's new satellite/stand-alone solid state controller. It is a 32-station unit, with each station capable of operating three Toro electric valve-in-head solenoids.

As with the central, this new satellite offers two-way communication. It receives, stores and sends all commands generated by central. At the same time, it up-loads to the central such key factors as satellite status, changes made in station timing at the satellite, and failure sensing.

Each station is capable of minute and hour timing, from 1 minute to 4 hours and 15 minutes per station, in one-minute intervals.

Toro's new Network 8000 Satellite also provides water-budgeting capability, with percentage increase/decrease from 1% to 900%.

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Circle No. 145 on Reader Inquiry Card

A HOME FOR THE PRAIRIE

Natural landscapes are becoming a practical alternative for the low-maintenance landscape manager.

by Heide Aungst, associate editor

Using chemicals to maintain manicured landscapes has long been accepted in the green industry. Then came the media-incited chemical controversy.

Those who shy away from chemicals look for more natural ways to maintain the landscape. Prairies have become a viable alternative, but they aren't without controversy either.

Prairies are defined as 70 percent grasses, 30 percent flowers, with less than one tree per acre, according to prairie enthusiast Brian Parsons of the Holden Arboretum in Cleveland, Ohio. A bedrock, usually limestone, underlays a prairie.

The biggest complaint is that prairies look like weeds, even though the mix of wildflowers and grasses, naturally crowds out most weeds. The aesthetic value of prairies is enhanced by the various wildflowers which bloom at different times from spring through fall.

The renewed interest in natural landscapes has sparked the formation of the Association for use of Native Vegetation In Landscapes (ANVIL) in Illinois.

Prairie maintenance involves burning the area every few years. This practice keeps down the woody vegetation. "In the old days, lightning naturally ignited fires or Indians set fires to improve hunting," Parsons explains.

Prairie burning is another controversy in the natural landscape movement.

"We in the highway business have some unique problems which makes burning difficult," says Charles Gouveia, roadside development architect with the Illinois Department of Transportation. "Ecologically it's a good idea, but politically it's not always practical."

Still, Gouveia has had success with using prairies along Illinois highways. In 1980, he planted about 30 acres of prairie and "salt grass" along Chicago's Eaton Expressway.

Salt grass is the salt-resistant turf mix of Galway turf-type tall fescue, Fults, Dawson creeping red fescue, buffalograss, Rugby bluegrass, and Delray ryegrass, developed by Northrup King, which will be available in sod form this fall.

A prairie reserve at Chicago Botanical Garden.

Mark Grundman, turf specialist with Northrup King

"We needed things that would live in poor soil and establish a stable community," Gouveia says. "Natives cope with our environment because they've been here for years."

Using prairie has cut mowing from six times a year to twice annually. "Saving money is the name of the game," Gouveia says.

Spraying is no longer needed either. This raises the controversy of how chemical manufacturers will react to natural landscaping.

"I think the chemical companies will probably be upset about the movement," says Mark Grundman, turf specialist with Northrup King Seed, which is researching prairie grasses. "We don't want to get them mad. We just want to try to control weeds and erosion naturally without pumping unnatural materials into the earth."

For this reason prairie is being integrated into landscapes from homes to parks, and even golf courses.

Paul Boizelle, superintendent at Onwentsia Country Club in Lake Forest, Ill., put prairie in his roughs five years ago. Low maintenance and cost savings are the biggest advantages, Boizelle stresses.

Parks can use native grasses, such as buffalograss, which only grows to six inches. The disadvantage of buffalograss is that it greens up late and browns out early. Grundman says this problem is solved by mixing the buffalograss with other turf varieties.

Old School Forest Preserve in Illinois has successfully used a buffalograss mixture for the turf in the picnic areas. During a drought in 1983, the native buffalograss remained green.

Wetlands are the transition area between land and water. The soils are saturated with water, and the water is always in a state of gradual movement.

About 30,000 acres of wetlands are destroyed in the Midwest each year. Such destruction robs wildlife of their homes.

The restoration of wetland areas can solve severe flooding problems by creating a natural area for water to flow through.

Despite the questions raised by the natural landscape movement, ANVIL members are convinced it is a solution to many landscape problems. They will hold a national conference on the subject at Purdue University in June 1987.

For more information on the Association for the use of Native Vegetation In Landscaping, contact: Dr. Ray Freeborg, Dept. of Agronomy, Purdue University, West Lafayette, IN 47907; (317) 494-4784. **WT&T**

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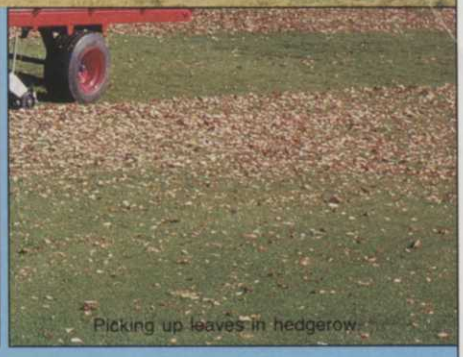
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Circle No. 108 on Reader Inquiry Card

FIRST OF THREE PARTS

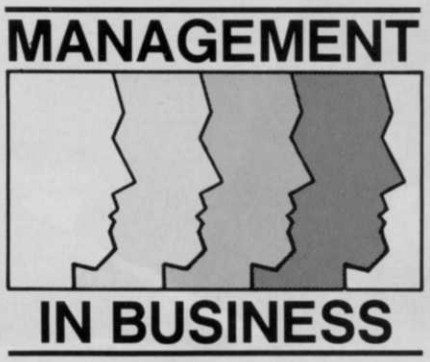
MOTIVATION

Having trouble getting the most out of your employees? First, you should learn the theories of motivation.

by Rudd McGary and Ed Wandtke

Motivation is a word that has a wide variety of meanings for most business people and one that is used a great deal without any real thought as to its implications in a business organization.

Our motivation discussion is divided into three specific topics. This month we will discuss some of the major motivational theories. Next month, we'll look at specific motivational issues in the Green Industry. The third article will cover compensation factors and motivation.



Moving through motivation

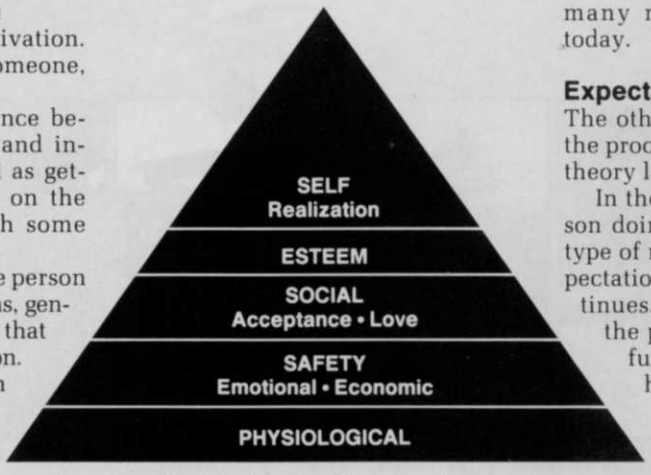
Let's examine the idea of motivation. The word means to "move" someone, to get them to do something.

There is a distinct difference between long-term motivation and inspiration (inspiration defined as getting people to do something on the spur of the moment through some action).

In long-term motivation the person has to feel that there are reasons, generally related to self-interest, that they should perform some action.

One of the facts known about motivation is that only in severe emergencies can a person be motivated to do something they don't want to do. Many managers approach motivation as if there are a set of "buttons" they can push in order to make someone do something.

The simple notion of cause and effect works well on certain types of laboratory animals but humans are too complex to simply respond the same way to a stimulus each time that stimulus appears.



Maslow's Theory of Motivation

In order to better understand motivational theories we can divide them into two basic groups—content and process.

The Maslow pyramid

Content theories are best exemplified by Maslow's Theory of Motivation (above). As noted in the table, this theory suggests that we go through stages of need that motivate us.

At the bottom of the pyramid are the physiological needs—food, rest, shelter, etc.—that we need to survive. Maslow suggests that we aren't motivated to do anything else until these needs are satisfied.

Each step of the pyramid works the same way. If the lower levels aren't satisfied we aren't motivated to reach the next level.

Another researcher, Herzberg, offers a view of motivation within organizations that has many uses within the Green Industry.

He suggests there are five major motivators within organizational life: achievement, recognition for accomplishment, challenging work, increased responsibility, and growth.

The five motivators are still seen in many motivational models used today.

Expectations and motivation

The other side of motivation theory, the process side, can best be seen in a theory labeled "expectancy."

In the expectancy theory, the person doing the task expects a certain type of reward for the task. If the expectation is met, the motivation continues. If the expectation is not met, the person turns to other tasks or functions which will meet with his/her expectations.

Certainly, anyone involved in organizational life has seen co-workers leave jobs because it didn't measure up to their original expectations.

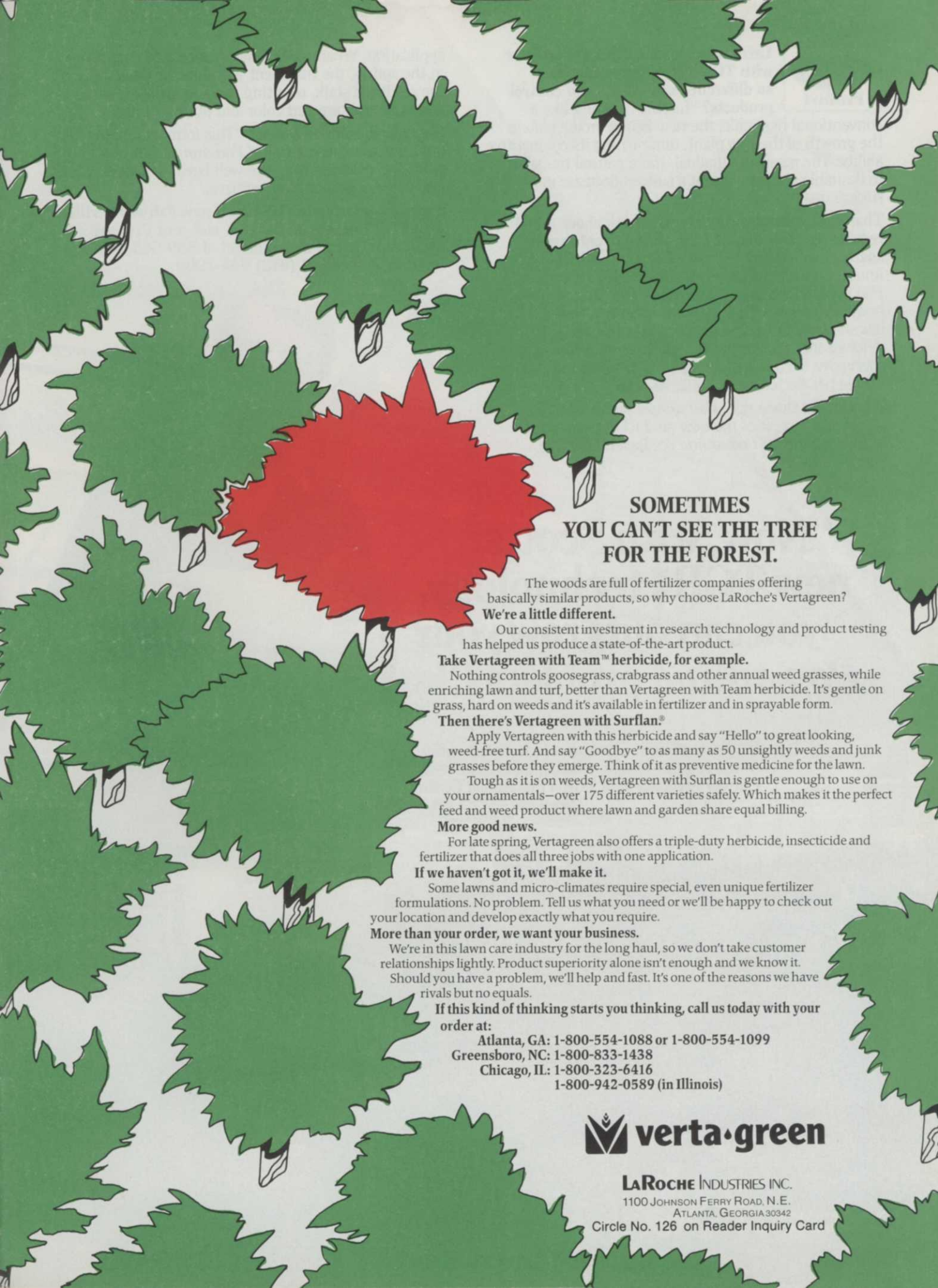
The process theories suggest that motivation is ongoing, and that people in organizations change their motivational needs as their own situations change.

The content theories suggest that the variables in motivation—achievement, growth, recognition—always remain the same. Both sides have gained a great deal of use in organizational motivation.

Additionally, both types of motivational theories find people who try to disprove them.

As we continue discussing motivation within the Green Industry, we will use parts of theories from both the content and process sides. That will be the topic of the article that will appear in the November issue of WEEDS TREES & TURF. **WT&T**

Wandtke and McGary are senior consultants with All-Green Management Associates in Columbus, Ohio. Dr. McGary focuses on marketing and management issues. Wandtke focuses on operations and financial questions.



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Circle No. 126 on Reader Inquiry Card

Larry, what makes Fairway Fertilizer with TGR™ Poa Annua Control so different from other weed control products? "Instead of acting like a conventional herbicide, the new Scotts product *slows* the growth of the *Poa* plant, diminishing its competitive ability. The result is a gradual, more natural transition to desirable grasses without a sudden decrease in playing surface quality."

That really changes the way you think about growth regulators. How does it fit in with current turf management practices? "Fairway Fertilizer with TGR Poa Annua Control has proven to be effective in reducing *Poa* populations even under conditions that would normally enhance their growth. Extensive testing has shown that this product fits in with a range of different management practices. Treat your turf with successive fall and spring applications until the *Poa annua* has decreased to the desired level."

What about those ugly *Poa annua* seedheads? "A significant benefit of the new product is a reduction in the visibility of *Poa annua* seedheads after one application. When applied before seedhead emergence in the spring, the treatment will slow the emergence of the seedhead stalk, resulting in fewer visible seedheads and more uniform turf color and playing surface."

How about color response? "This formulation provides not only selective control of *Poa annua,* but also extends the greening response well beyond what an equal rate of fertilizer alone can achieve."

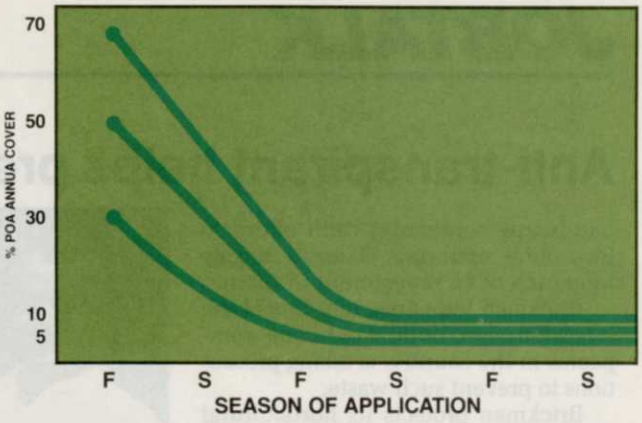
For more information on Scotts new Fairway Fertilizer with TGR Poa Annua Control, call your ProTurf Tech Rep. Or call Scotts direct at 800-543-0006. In Ohio, call collect (513) 644-2900.

"Now, with Scotts® new TGR*™ technology, you can outgrow your *Poa annua* problems."

Dr. Larry Widell, Scotts Research project leader (Plant Growth Regulator R&D), talks about new **Fairway Fertilizer with TGR™ Poa Annua Control.**

*Scotts trademark for its turf growth regulator technology

Aggressive bentgrass can be seen encroaching into an area of *Poa annua* treated with ProTurf Fairway Fertilizer with TGR Poa Annua Control.



Typical *Poa annua* population suppression is shown over time with continued use of Scotts Fairway Fertilizer with TGR Poa Annua Control. The degree of control may be influenced by turfgrass management techniques, climate, soil type and *Poa annua* biotype.

The treated area (left) in this mixed *Poa annua*/bentgrass fairway has been converted to predominantly bentgrass after three applications.

Notice the selective elimination of the *Poa annua* and the increased greening of the treated plots 7 weeks after application to a mixed stand of perennial ryegrass, Kentucky bluegrass and *Poa annua*.

Fewer seedheads are apparent in fairways when treated in the spring. The lens cap indicates the upper right corner of the treated plot.

Circle No. 138 on Reader Inquiry Card

Anti-transpirant helps prevent landscape losses

Landscape companies can't afford to lose plant materials. There's simply too much of an investment in them.

Brickman Industries Inc., one of the largest design/build landscape companies in the country, is taking precautions to prevent such waste.

Brickman protects its horticultural materials being transplanted by using an anti-transpirant.

"The anti-transpirant is actually a waxlike coating which protects leaves against excessive loss of moisture during periods of stress," says Daniel C. Skinner, support services manager at Brickman's Langhorne, Pa., office. "Plug up the stomata with the anti-transpirant and there is less water loss."

Wilt-Pruf anti-transpirant, which Brickman uses, dries to form a clear, flexible film on leaves and does not interfere with plant growth, according to the product's manufacturer. Respiration, osmosis, and photosynthesis are reduced just slightly.

Wilt-Pruf, a water-based pine oil emulsion, is an organic, biodegradable material that comes in containers ranging from 14 ounces (aerosol) to 55-gallon units. Brickman buys its 55-gallon drums through a local lawn and garden distributor.

Daniel C. Skinner, support services manager at Brickman's Langhorne, Pa., regional office, says using anti-transpirants on trees to be moved is vital.

Tree-moving: a specialty

Brickman performs tree moving at all its regional offices, often handling trees six to 15 inches in diameter. The trees are dug by hand and the balls are then shaped and wrapped with burlap.

"We have a 99 percent success ratio in moving big trees," says Skinner, noting the biggest tree the company has moved weighed 80,000 lbs.

Applying an anti-transpirant reduces the shock when trees are dug, says Skinner. "We spray the tree with the anti-transpirant the day before digging. We have been using Wilt-Pruf at a 1:5 ratio."

Brickman uses the same ratio on materials being held and on newly-established landscape materials.

Brickman's Langhorne office sometimes specifies that the trees or other materials they purchase be sprayed with an anti-transpirant the day prior to digging for delivery.

"We do that in our own nurseries," says Skinner. "Our own crews also prune out one-third of the foliage on big trees in addition to spraying with Wilt-Pruf ahead of digging."

At the Langhorne office, the nursery is filled to capacity each fall since Brickman crews plant year round. Planting in the winter is common in the East and any materials coming from Midwest nurseries must be brought in before freezing weather halts digging.

"We spray these trees every month. We do the same during the winter for the majority of the plantings we have made the prior season," says Skinner.

For more information on Wilt-Pruf, contact Wilt-Pruf Products Inc., P.O. Box 4280, Greenwich, CT 06830.

WT&T

A Brickman crew member sprays an anti-transpirant on a new landscape planting to prevent dessication.

There's no better value for crabgrass control than Balan. And none with more experience. It's been used more years by more golf course superintendents than any other granular preemergence herbicide.

Its easy-to-spread clay carrier is one reason why. It makes application more uniform, reduces the dust common in other carriers and also increases your equipment calibration accuracy.

With Balan, you get superior preemergence crabgrass control for eight to ten weeks with a single application. Then you can overseed or perform other turf management jobs, without worry of reduced seed germination. If you want longer control, the Balan price allows you a second application.

Balan. The better spreader. Talk to your Elanco distributor soon. Or write:

Elanco Products Company
A Division of Eli Lilly and Company
Lilly Corporate Center, Dept. E-455, Indianapolis, IN 46285, U.S.A.
Balan®—(benefin, Elanco Products Company)

Circle No. 117 on Reader Inquiry Card

Proven Balan®. The better spreader for crabgrass control.

THE ADV
OF A BROKE

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Introducing the Broken Promise. A bold guarantee that puts an end to downtime by keeping you working even when your gas trimmer isn't. Simply stated, the Broken Promise guarantees if your Toro straight-shaft gas trimmer fails due to equipment failure within the first year, your Toro dealer will fix it right away or give you a loaner at no charge.

We believe our straight-shaft gas trimmers are the finest on the market. In fact, their performance and value equal those of any Toro product. The Broken Promise applies to the

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24cc TC3000 and TC4000, and the 33cc TC5000. All three feature Toro's famous straight-line power, plus the versatility of optional blade accessories.

What's more, we want you to take advantage of this time-saving guarantee as soon as possible. Stop in and see your participating Toro Dealer for details about the "Broken Promise" No Downtime Guarantee.

After all, there are many gas trimmer dealers who promise customer satisfaction. Now only your Toro Dealer guarantees it. Promise.

TORO

HAVEN'T YOU DONE WITHOUT A TORO LONG ENOUGH?

Circle No. 254 on Reader Inquiry Card

PROBLEM SOLVERS

by **Balakrishna Rao**, Ph.D.

Privet hedge problems

Problem: *Every year the privet hedges show grayish-colored leaves. Eventually they become yellow. It looks like insect damage. Any idea what it might be and what can be sprayed to protect them? (New York)*

Solution: From the symptoms you are describing, the dendrothrips problem seems to be related to privet thrips (*Dendrothrips ornatus*). In some years, this pest can become very serious. Affected plants show a grayish, dusty appearance. The larvae are yellow and spindle-shaped; the adults are dark brown to black with a bright red band.

Spray with a mixture of malathion and Sevin twice at 14-day intervals when the thrips are first noticed. Fertilize and water the plants as needed to improve their vitality.

Dog repellents

Problem: *Are there any chemicals which can be applied on humans to repel dogs? (Canada)*

Solution: I am not familiar with any products on the market which can be used as repellents against dogs. Reports indicate that moth balls can be used on bushes to distract male dogs. It would be nice to have some repellent to distract dogs from chasing while providing service in the yard. Maybe some of our readers may respond to this question.

Sequestrene use on lawns

Problem: *Can we use Sequestrene on St. Augustinegrass and bermudagrass lawns to supply iron? What is the rate? (Texas)*

Solution: Yes, you can use Sequestrene on St. Augustinegrass and bermudagrass lawns to supply iron. Use at ½ lb. per 1,000 sq. ft. This is an expensive material compared to other products on the market.

Control of scale insects

Problem: *On our clients' properties we see a number of different kinds of scale insects on different plants. What is the best control method? Is it possible to control all of them by applying one chemical at one time? (Michigan)*

Solution: In general, the best management approach to scale insect problems is to apply dormant oil against overwintering scales followed by a chemical application later when the crawlers are seen.

Scale insect problems are difficult to manage. Most overwintering scale insects can be managed to some extent by the application of dormant oil alone or in combination with ethion before bud break in the spring.

The timing is not dependent upon the species of scale insect. The crawler emergence of these scale insects, however, may vary from species to species. Accordingly, the chemical application time should coincide with specific crawler emergence. Therefore, one application of a given insecticide will not be able to provide control of various scale insects.

The best approach is to identify the scale insect, determine the crawler emergence period, and apply a crawler control spray as a follow up to a dormant oil spray. Dormant oil can be phytotoxic to some species. Read and follow label directions.

Solving the weedy infield

Problem: *After our softball and baseball fields were built, they were left unattended for two years. Now we have many weeds growing in the infields. During original seeding part of the infields was sown. What would be the best way to get rid of the problem? (Minnesota)*

Solution: First, you need to determine which types of weeds are causing your problems. Use a pre-emergence herbicide to manage annual grassy weeds like crabgrass.

Make sure that the application is done about two to three weeks before the predicted crabgrass germination period in early spring. After the herbicide application the area should not be disturbed, which would break the chemical barrier and result in weed problems.

For broadleaf weeds, post-emergence herbicides should be applied when weeds are actively growing. If you are dealing with mostly rosette-types of weeds (e.g. dandelions), a herbicide containing 2,4-D with MCPP is sufficient.

In most cases, an application in April and again in October is necessary. Creeping or vining weeds like knotweed require dicamba for adequate control. From late spring through early fall, whenever the weeds are actively growing, apply a herbicide containing 2,4-D, MCPP, and dicamba.

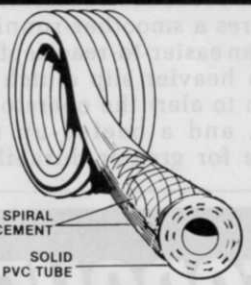
This combination will not take care of all the weeds. Weeds like veronica, violet, and ground ivy are difficult to control with the normal application of amine formulations. These weeds can best be managed by the use of products containing ester formulations of 2,4-D and/or triclopyr.

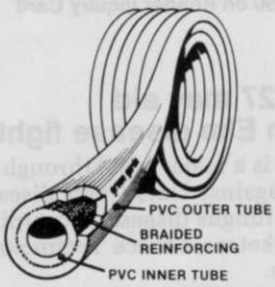
Balakrishna Rao is Director of Lawn Care Technical Resources for The Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

You Can Depend on the green garde®
High Performance Spray Team

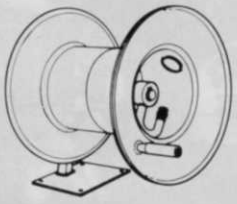
NEW! 4-SPIRAL WHITE HOSE . . . a unique 600 PSI hose designed to withstand the rigors of the spray industry. **Solid PVC Tube** with **two layers of criss-cross spiral reinforcement . . . nothing like it anywhere!** Available in 3/8″ and 1/2″ ID, 300 and 400 foot continuous lengths.





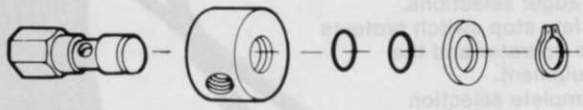
BRAIDED NEON HOSE . . . the best quality hose money can buy. **Avoid downtime and chemical spills . . . use the hose preferred by top operators all over North America.** 800 PSI working pressure; available in 1/4″, 3/8″, 1/2″, 5/8″ and 3/4″ ID; 300, 400 and 600 foot continuous lengths. Some odd lengths, in various ID's, also available at special prices.

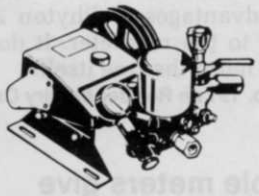
JD9-C Hi-Performance SPRAY GUN . . . used by just about everybody. A rugged, dependable, versatile performer in any spray application. Fully adjustable from fog to long distance stream. **Five tips** available to fit your needs . . . **adapter** to attach the many fine Spraying Systems wands and spray tips. **Also available . . . JD9-CT with gauge port and plug,** allows you to easily calibrate your sprayer.



Heavy-Duty ALUMINUM HOSE REELS . . . unique single pedestal design makes mounting anywhere a breeze. Constructed of marine alloy aluminum -- eliminates corrosion problems. **Attractive . . . and popularly priced!** Available in four sizes, with capacity from one to four hundred feet of 1/2″ hose. MARK IV model accepts 250 feet of 3/4″ hose.

REPLACEMENT HOSE REEL SWIVELS . . . tested at over 3000 PSI dynamic service pressure! The same heavy-duty units supplied on our hose reel, now available separately. Fits Hannay and other reels with no modification. Extended service **VITON** o-rings means longer wear; and, when replacement *does* become necessary, it can be done, in the field, with an inexpensive kit, in less than a minute. Three sizes: 1/2″, 3/4″, 1″.





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Heavy-duty ROOTFEEDER . . . for tree and bed rootfeeding. Built to last . . . replaceable hardened tips. Up to 12 GPM capacity. Two stainless steel feeding needle extensions also available. **Fits on JD9-C Spray Gun.**

ACCESSORIES AND PARTS . . . we have exclusive design flooding nozzles (five patterns); hosecutters with stainless steel blades for fast, *safe* clean cuts on PVC hose; plated steel long-shank GHT hose fittings in 1/2″, 5/8″ and 3/4″ sizes; aluminum alloy short shank GHT hose fittings in 3/8″, 1/2″ and 3/4″ sizes; mini-hand duster *and* chest-carried combination duster/granule applicator; Band-It® banding products and tools, etc. All replacement parts in stock, **always.**

SERVICE . . . our most important product! It is the standard of the industry . . . and it's included in the price of every Green Garde product you buy. Normally, orders are shipped same day as received.

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ENCAP PRODUCTS COMPANY P.O. Box 278 Mt. Prospect, IL 60056

New PreSeeder offers several new features

The ATI Corporation has introduced an improved PreSeeder which offers several new features designed for operating ease and convenience.

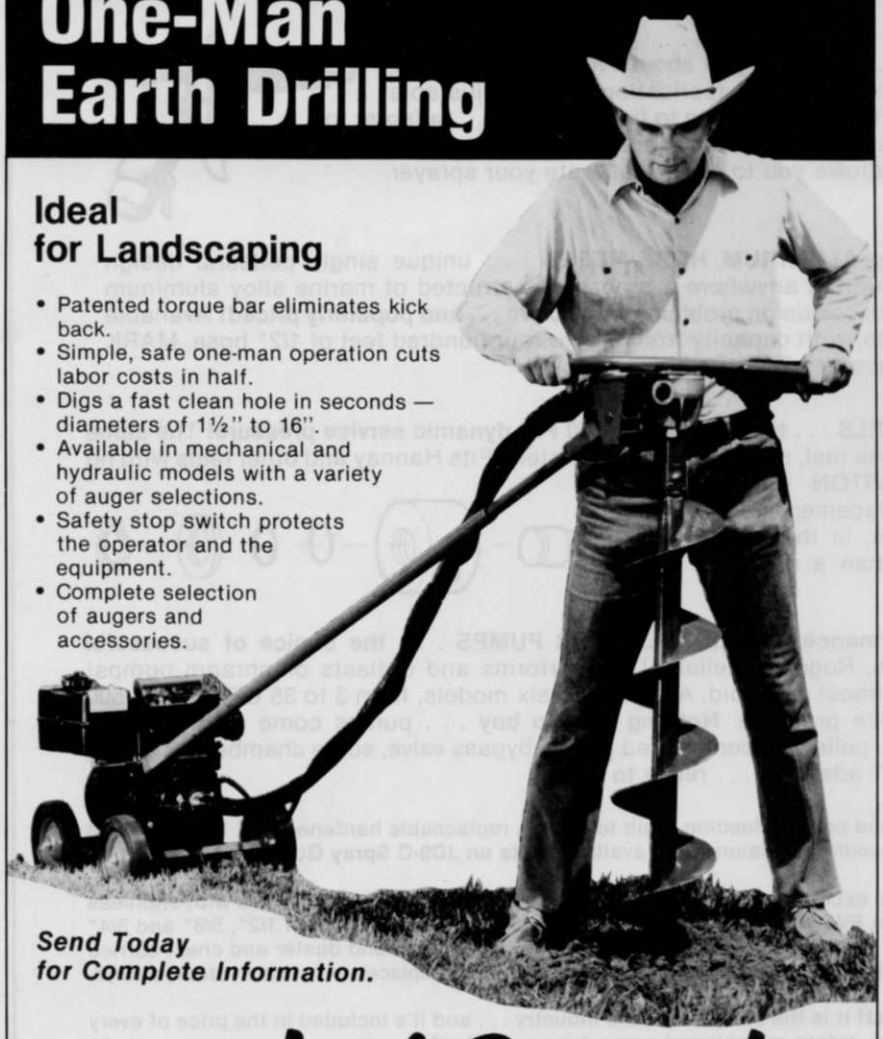
The PreSeeder, according to ATI, features a smoother-running drive line, an easier-to-read depth indicator, a heavier slip clutch with an alarm to alert the operator to slippage, and a beefed-up unitized frame for greater durability. The chain drive runs in oil bath resulting in longer life and less maintenance.

The PreSeeder speeds up soil preparation as much as four-fold, and in addition to creating a fine-textured seedbed for better germination, also levels out high and low spots and lines up stones and debris for easy removal.

The machine is easily adaptable to most tractors and requires only a 20 hp tractor for operation.

Circle No. 190 on Reader Inquiry Card

TORQUE-FREE One-Man Earth Drilling



Ideal for Landscaping

- Patented torque bar eliminates kick back.
- Simple, safe one-man operation cuts labor costs in half.
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Circle No. 130 on Reader Inquiry Card

Phyton 27 may aid in Dutch Elm disease fight

Phyton 27 is a major breakthrough in the fight against Dutch elm disease and other fungus diseases, according to the marketeer, Source Technology Biologicals.

The fungicide, with active ingredient copper sulphate pentahydrate, is very deadly to fungus and bacteria. Phyton 27 actually kills the Dutch elm disease within the tree while

fungistatic products only allow the fungus to cease growing or reproducing.

Simple injection, reduced wounds on the tree, and labor savings are three advantages to Phyton 27, according to the marketer. It does not burn or harm the tree itself.

Circle No. 191 on Reader Inquiry Card

Portable meters give accurate pH readings

Engineered Systems and Designs' two new portable digital pH meters are designed for convenience and accuracy in the field or laboratory.

The model 57 reads an accuracy of .05 pH and displays to .01 pH. The model 59 reads to an accuracy of .01 pH and displays the same.

Both read the entire pH range of 0-14 and feature manual temperature compensation from 0-100 degrees Centigrade, a standardized control, an externally accessible slope control, and an on/off battery check switch. Both contain solid state circuitry and are

continued on page 74

Introducing

Two New Premium Turfgrasses

Premium Sod Blend Components

Julia Kentucky bluegrass is an outstanding European introduction now produced in the United States and marketed by LESCO. Under evaluation in the United States since 1978, this variety has exhibited excellent performance — consistently ranking in the top 10% of all Kentucky bluegrasses. Julia produces a dark green turf with medium fine texture and upright growth habit.

By providing excellent density and wear tolerance with little or no seedhead development under turf conditions, Julia meets the demands of even the most critical turfgrass manager. This new LESCO variety is perfect for those areas where a quality stand of bluegrass is desired. It is a component of the following LESCO seed blends and mixes: Quality Blue Blend, Classic Turf Mix, Premium Athletic Mix and Tuf-Turf Mix.

Julia
Kentucky · Bluegrass

Cimarron turf-type tall fescue is a very high quality turfgrass featuring a rich dark green color with good density. Developed by Dr. William A. Meyer of Pure Seed Testing and available now from LESCO, this new variety exhibits brown patch resistance and overall turf quality equal to Apache and Bonanza — two of the top commercial turf-type tall fescues. The increasing popularity and adaptability of turf-type tall fescues makes Cimarron a wise choice for many turf situations. It is a component in LESCO Transition Blend and Tuf-Turf Mix.

CIMARRON
TURF-TYPE TALL FESCUE

More to come...

Watch for the 1987 introduction of Trailblazer — the first of the new dwarf turf-type tall fescues. This new lower growing, darker green breed is a major breakthrough in turfgrass research and development.

To order or for more information on LESCO seed, call toll free.

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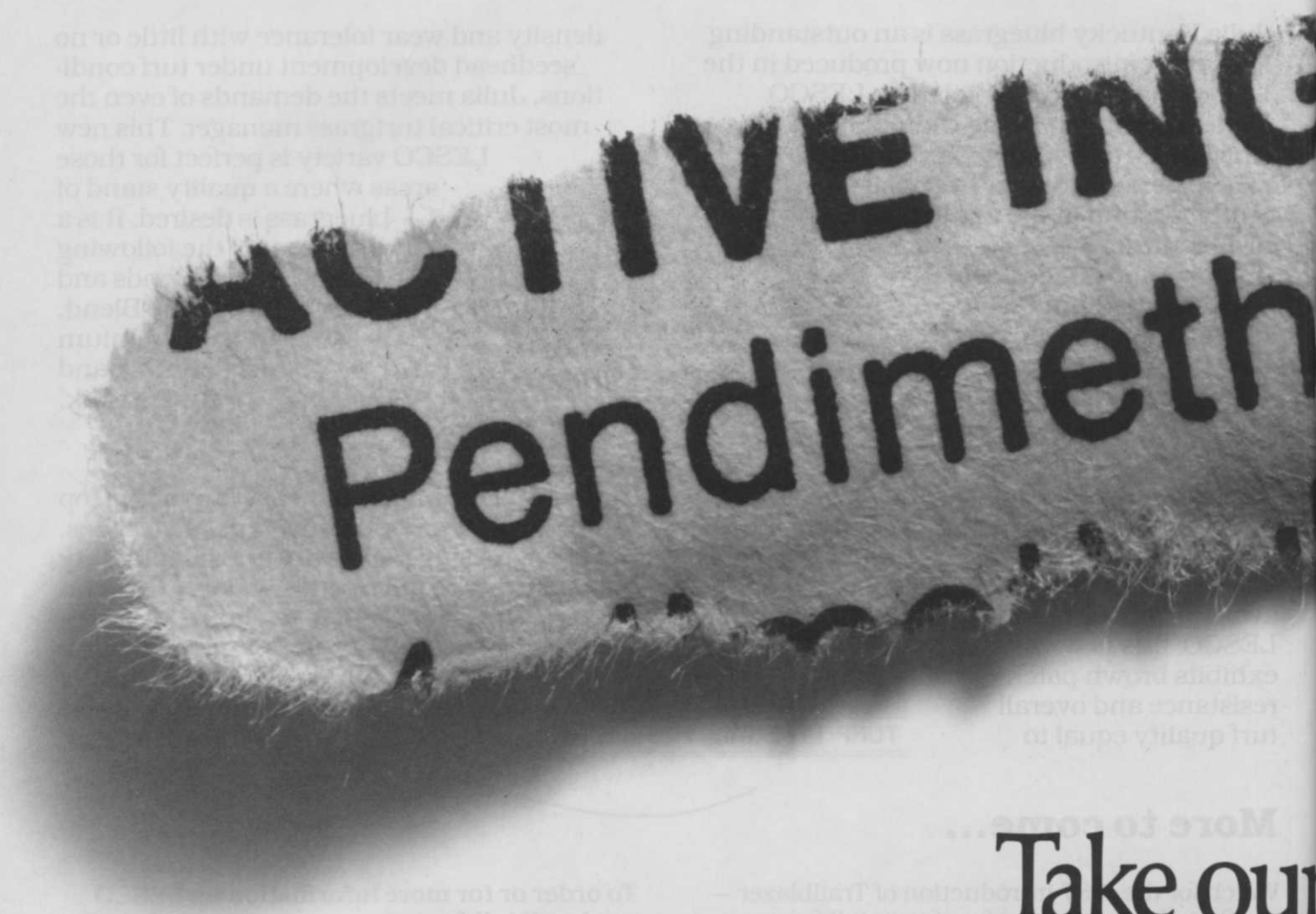
Circle No. 129 on Reader Inquiry Card

The most effective crabgrass



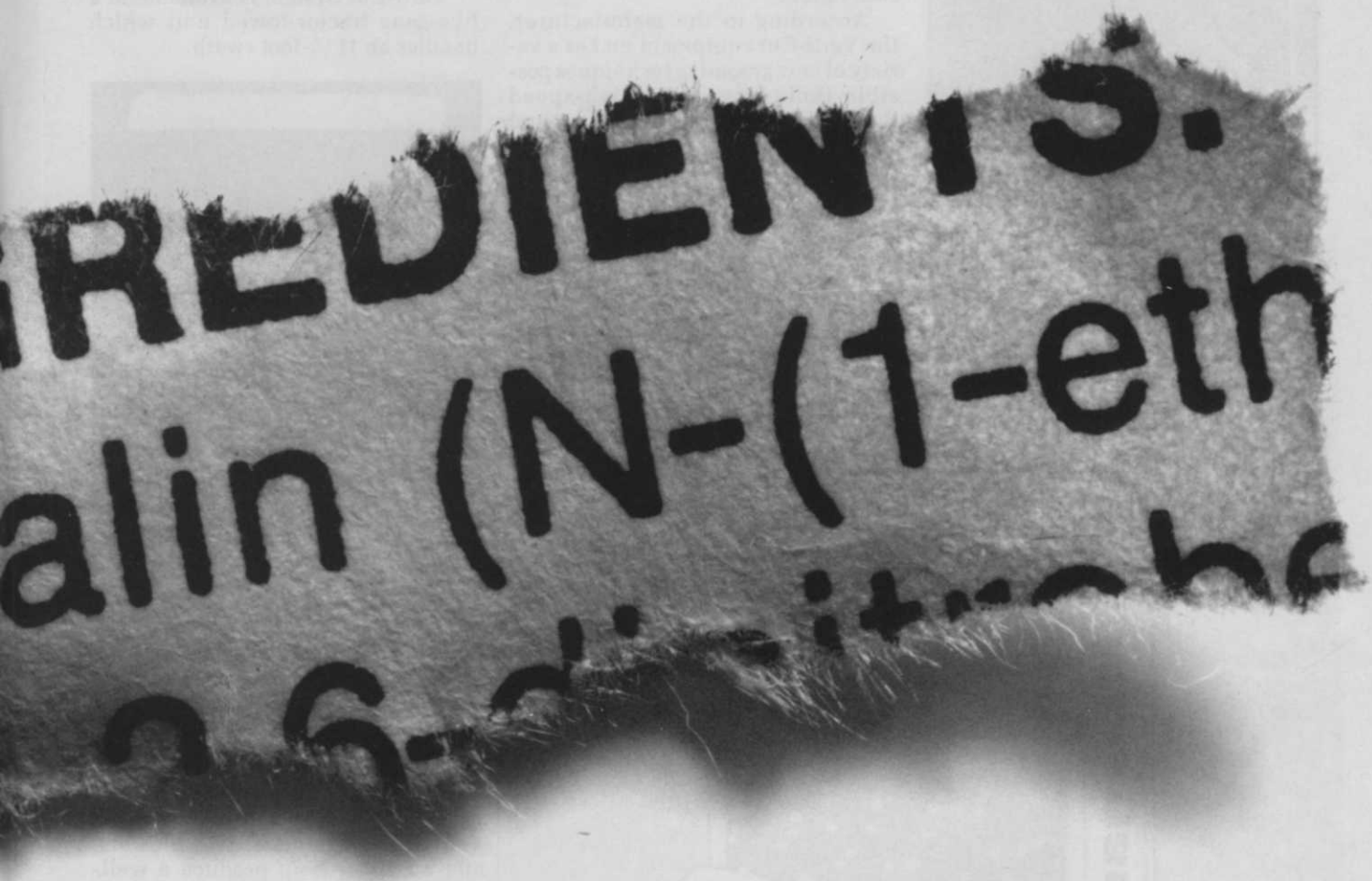
Take our

Labels of your best pre-emergent crabgrass and goosegrass herbicides have one thing in common. And it can be summed up in a word: *pendimethalin*.

That's because pendimethalin from American Cyanamid is the only active ingredient that offers season-long crabgrass and goosegrass control in both warm and cool season turf grasses. And it does it very economically.

But pendimethalin controls more than just crabgrass and goosegrass. One low rate also prevents other tough grassy weeds including foxtail, fall panicum, barnyardgrass and *Poa*

and goosegrass control.



word for it.

annua. Hard-to-control broadleaf species like oxalis and spurge are also eliminated with the same rate.

What's more, pendimethalin breaks down into the environment. And it doesn't move laterally through the soil. Which means it won't seep into bodies of water or stop vegetation you don't want it to stop. Plus, pendimethalin-based herbicides don't have an offensive odor like some products.

So remember, when you select a herbicide with pendimethalin on the label, you have crabgrass and goosegrass control in the bag. And our word. Always read and follow label directions carefully.

CYANAMID
Agricultural Division
Wayne, NJ 07470

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Circle No. 105 on Reader Inquiry Card

pH meters *from page 70*
powered by a single nine-volt battery.

Circle No. 192 on Reader Inquiry Card

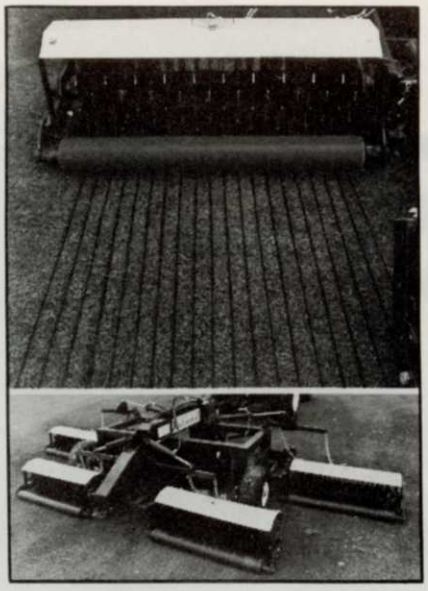
Verti-Cut System available in five-gang unit

The National Mower Company has introduced new verticutting system equipment for professionals whose turf requires sophisticated care and cultivation.

According to the manufacturer, the Verti-Cut equipment makes a variety of new grooming techniques possible including: ultra high-speed thatch removal; overseeding ground preparation; breaking up aerification plugs; "tickling" grass to combat matting; and cutting runners in bermuda or bent grasses.

The Verti-Cut equipment uses cutting blades mounted in standard 30-inch cutting unit frames. Blades can be spaced any distance apart and cutting depths can be adjusted.

Verti-Cut System is available in a five-gang tractor-towed unit which handles an 11 ½-foot swath.



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MILORGANIZE

before the snow flies

Naturally Organic Milorganite on dormant turf provides nutrients when they are needed, and assures an early green-up in the Spring.

Milorganite

Milwaukee Metropolitan Sewerage District
735 North Water Street
Milwaukee, WI 53202

Circle No. 133 on Reader Inquiry Card

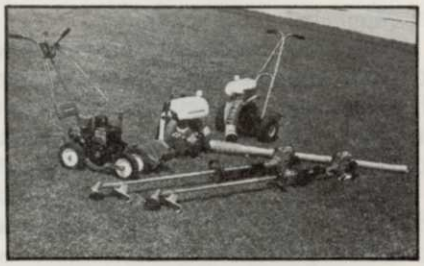
Grooming line used to finish the job

Jacobsen's grooming tools finish the job off to give it a professional touch. Two string trimmers, two blowers, and an edger help produce a well-groomed look for fine landscapes.

The J-24 and J-33 string trimmers come with 24.1 cc and 33.3 cc engines, respectively.

The J-55 backpack blower with two-cycle engine blows 530 cu. ft. of air per minute. The J-88 push blower with 180-degree rotation and a two-cycle engine produces an air flow of 880 cu. ft. per minute.

The commercial edger, which conveniently converts to a horizontal trimmer, has a four-wheel design that provides secure riding on sidewalks and other hard surfaces.



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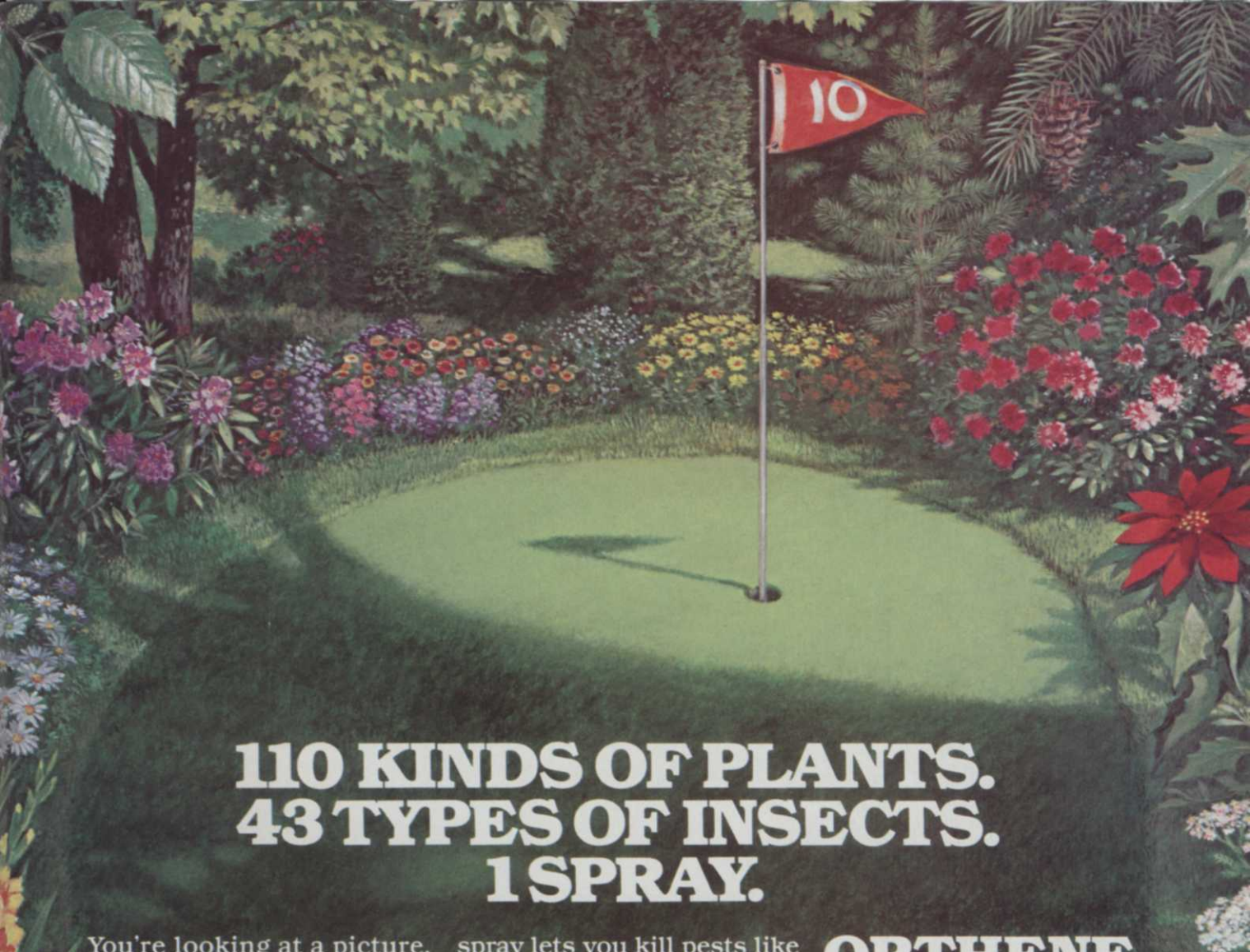

110 KINDS OF PLANTS. 43 TYPES OF INSECTS. 1 SPRAY.

You're looking at a picture, not of a place, but of an idea: ORTHENE® Tree and Ornamental Spray, and why it means so much to professional gardeners, nurserymen, arborists and golf course superintendents.

ORTHENE offers blanket protection against an amazing variety of insect pests. It's cleared for use on a long list of trees and plants, from orchids to roses to ponderosa pine, even for turf. Cleared last year for use against turf insects, ORTHENE* has just been okayed for mole crickets in Florida—the main enemy of professionals' healthy greens and fairways.

By using ORTHENE, one spray lets you kill pests like tent caterpillars, whiteflies, Japanese beetles and thrips on contact. Plus it provides lasting residual action against other insects from aphids to scale crawlers to sod webworms. It's a great way to make the whole job of protecting flowers, trees and turf simpler, and more effective.

If you're a professional in the plant care industry, ORTHENE can actually make it easier to do a better job of protecting plants. You ought to know more about it. To find out, send in this coupon.

*ORTHENE 75 S Soluble Powder (Florida SLN).

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Circle No. 221 on Reader Inquiry Card

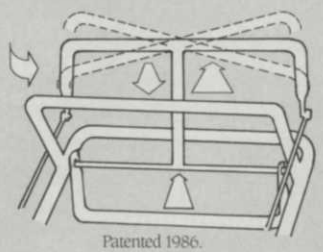
Take control of hostile territory.

Trees, gardens, shrubbery, even playground equipment can turn any job into an unwelcome obstacle course. That's where you need all the control you can get. And you get it with Toro's versatile line of commercial walk-behind rotaries. They're built with the kind of features you need to tame any hostile terrain.

Commerical 116

Commercial 112

There're four models available—110, 111, 116 and our new 112. With each you can choose the unique traction unit you need as well as interchangeable decks and a sulky or bagging kit.


Patented 1986.

For precise, effortless steering, each mower features a single T-bar control handle. Simply push the bar to mow, then release it to stop. This design lessens driver fatigue and dramatically improves maneuverability.

Toro rotaries also feature a 4-speed transmission with power reverse. Not only is

shifting easier, so is maneuverability. The machine does the real work, not your operators.

For cutting control our exclusive pin-and-bracket height of cut adjustment is the answer. Just move four pins and you've quickly changed cutting heights. Additional cutting control is provided by Toro's unique floating cutting units inside the carrier frames. They follow the contours of the terrain enabling you to get a quality cut.

If service is ever needed on your rotaries, Toro can put you back in action fast. Easy-access design is one of the reasons; all controls and parts are easy to get to and service. Add comprehensive support services and programs from the distributor and dealer, and you're assured of cutting on schedule.

If you'd like to take control of hostile territory, write to The Toro Company, Dept. WPM, Commercial Marketing, 8111 Lyndale Avenue South, Minneapolis, Minnesota 55420. You'll learn how Toro's mid-size rotaries outmaneuver the competition. Even standing still.

Commercial 111

Commercial 110

TORO®

The professionals that keep you cutting.

Circle No. 144 on Reader Inquiry Card

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Slicer/seeder made for all types of terrain

The SS-35-20 is the only all-terrain slicer/seeder, according to its manufacturer, Salsco.

The SS-35-20 handles inclines up to 40 degrees. It can cover 18,000 sq. ft. per hour with depth adjustments of 2½ inches maximum at ¼-inch increments.

The machine seeds within a 39-inch radius using a 10 hp Briggs & Stratton engine. It can plant rows two or three inches apart or a 20-inch seed bed.

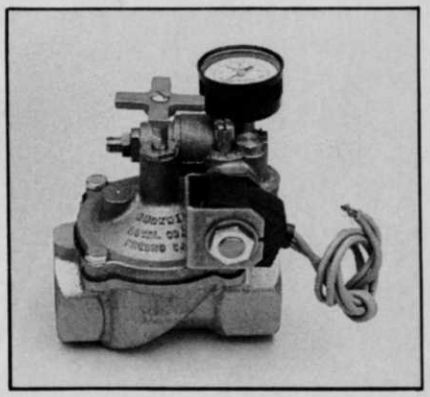
Circle No. 195 on Reader Inquiry Card

Valves designed for maximum efficiency

Buckner's new 20120 Bronze Series pressure regulating valves are specially designed to reduce and regulate pressures so that maximum efficiency can be derived from the sprinkler and drip irrigation systems.

The Buckner valve has no side-mounted external regulators. All porting and regulation is engineered internally within a bronze casting that fits on top of the valve, eliminating the traditional valve damage associated with external tubing. It is also designed to allow installers to set the downstream pressure at the valve with or without electric power.

The Bronze Series comes in sizes from ¾-inch to 3 inches. Outlet pressures can be set from 10 to 100 psi with flows as low as 1 gpm.



Circle No. 196 on Reader Inquiry Card

Arbor Master 50 creates less root damage

The Burkeen Manufacturing Company's Arbor Master 50 Tree Spade is available in either truck or loader mount, and features a 2250-pound root ball that is 48 inches deep for less root damage and better tree livability, according to the manufacturer.

The Arbor Master 50 is all hydraulic with controls located for optimum visibility and safety. The advanced design gives better weight distribution to increase stability. It quickly disconnects so the truck can be used for other jobs.

Circle No. 197 on Reader Inquiry Card

Flail mower is also used for dethatching

Middlesworth Engineering and Manufacturing has introduced the Model C44F commercial flail mower. The 44-inch outfront mower can also be used to dethatch and mulch leaves.

The unit has hydrostatic transmissions with speeds up to 6 mph and true zero-turning radius. The deck is offset 3 inches for trimming and mowing next to buildings and obstacles.

The C44F uses an 11 hp Briggs & Stratton Industrial/Commercial engine.

Circle No. 198 on Reader Inquiry Card

Put a WHIRLWIND FORCE to work TO SWEEP UP LEAVES, LITTER etc.!

VACUUMS 3600 CU. FT. PER MINUTE

TAKE-ALONG 'BIG JOB' LOADER

HAUL THIS 16 horsepower Mi-T-VAC on any truck (or on trailer we make) and clean up wet or dry problems. Fills dump truck with leaves in 25 minutes!

Lo-Blo, the Air-BRoom®

HEAVY DUTY BLOWER-SWEEPER helps a small crew gather more leaves, trash, clippings in less time. For details on today's 3 to 45 horsepower models, call Area 216 **947-2344.**

Model 16 SVL Complete with 8 inch hose

Hose reaches out 20 feet

MODEL 8K

ATWATER STRONG DIVISION

BOX 68 · ATWATER, OHIO 44201

LAWN EQUIPMENT SINCE 1949

Circle No. 106 on Reader Inquiry Card

FOCUS ON TURF
in Rochester, New York
November 12-14, 1986

NEW YORK STATE TURFGRASS ASSOCIATION

NY State Turfgrass Association

- EDUCATIONAL CONFERENCE
- 225 TRADE SHOW BOOTHS
- PRE-CONFERENCE SEMINARS
- SPECIAL INTEREST SESSIONS
- IN-DEPTH WORKSHOPS

For further information please contact
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210 Cartwright Boulevard
Massapequa Park, New York 11762
(516) 541-6902

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WANT TO BUY OR SELL a golf course? Exclusively golf course transactions and appraisals. Ask for our catalog. McKay Golf and Country Club Properties, 15485 N. East Street, Lansing, Michigan 48906. Phone (517) 484-7726. TF

FOR SALE

1978 ASPLUNDH WHISPER CHIPPER - 4 cylinder Ford, 12″ rotor, extra blades, blower, one owner, runs like new - $5000. 312-481-9128. 10/86

2-1985 International 1654 Series Chemlawn Style Units—(1) Tree and lawn spraying combination unit, 6.9 liter diesel 1250 split tank, 2 hose reels with 300 feet of hose each, 50 GPM trees and 10 GPM lawn, 15,000 miles, like new condition, $19,995. Lawn Spraying Unit—6.9 liter diesel 1250 gallon split tank, 100 gallon bullet tank, 2 hose reels with 300 feet of hose each, 10 GPM, 15,000+ miles, like new condition, $18.995. Call Paul at 516-231-9092. 10/86

1979 - F-700 W/57 Ft. Hi-Ranger - $20,000. 1979 - F-700 W/50 Ft. Hi-Ranger - $19,000. 1975 - F-750 Cabover W/50 Ft. Hi-Ranger, Utility Body - $14,000. 519-735-8747 after 6. 10/86

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74 Brouwer Sod Harvester. 3000 hours. Excellent condition. Tulsa area. $16,500.00 918-227-0252. 10/86

For sale: Lawn/landscape maintenance business located in Lexington, Kentucky. Sales volume $175,000/year; 200 customers. Excellent reputation; premium accounts. Good growth potential in affluent metropolitan area. Call 606/273-3132. 10/86

Jacobsen Slit Cedar 9 horsepower Briggs and Stratton engine. Good condition. $1,700. Call (312) 773-0661. 10/86

FINN HYDROSEEDERS & MULCH SPREADERS. New & Used. Wolbert & Master, Inc., P.O. Box 292, White Marsh, MD 21162, 301-335-9300. 6/87

TREE FERTILIZATION GUN tested on over a million square feet of trees and shrubs all over the U.S. Good to 500 psi, repairable, non-corrosive. Buy direct from manufacturer, $106.00 (shipping included). Arbor-Nomics, Inc., 5634-A Buford Highway, Atlanta, GA 30071. (404) 447-6037. TF

BROUWER HARVESTER OWNERS! ELECTRIC DEPTH CONTROL. Save time and money with improved quality control. Make depth-of-cut adjustments, on the move, with one button finger tip control. Allows you to cut longer rows through varying soil conditions. $895. 30-day satisfaction guarantee and full-year warranty. Write or call: Shattuck Turf Equipment, 1872 N.W. 82nd, Des Moines, IA 50322, (515) 278-5255. Patent pending. 11/86

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2 Jim Dandy Tractors - $850.00 each; 2 Lawn-A-Mat stainless steel combines - $800.00 each; 1 tractor and 1 combine for parts - $350.00 each; 2 flatbed trailers - $150.00 each. Must Sell! (203) 325-3191. TF

SPECIAL NOTICE—~~Howard~~ Gems 20″, 24″, 30″ are in production again—equipped with Kohler, Wisconsin or diesel. Other rear tine tillers, 8″ to 40″, 5.7 hp to 24 hp, gas or diesel—from $995. Tractor Tillers and Turf Quakers, 30″ to 180″—from $995. Engines, pumps, generators, accessories . . . "Let Us Bid Your Equipment And Service Needs!" G. Gandy Equipment Services, 2031 4th Avenue, Joliet, IL 60433. 815-726-7921. 10/86

SPYDERS - Used and reconditioned 2500 S. Cooper, Arlington, TX 76015. 817-261-7346 Mark. 2/87

ZOYSIA MEYERS Z-52 SOD OR SPRIGS. EXCELLENT QUALITY DELIVERED ANYWHERE AT REASONABLE PRICES. DOUBLE SPRINGS GRASS FARM, SEARCY, AR. (501) 729-5691. 11/86

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BALL BARRIER NETTING: Made of olefin fibers. 6 1/2 feet and 25 feet high. Strong and tough. Will not rust. Easy to handle. For Driving Ranges and Golf Courses. Keep golf balls from straying off-course. J. A. Cissel Mfg. Co., P.O. Box 339, Farmingdale, N.J. 07727. 1-800-631-2234. TF

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LAWN SEED. Wholesale. Full line of top quality grasses. Improved bluegrass varieties, fine fescues and fine bladed ryegrasses. We specialize in custom mixing. Oliger Seed Company, 2705 Wingate Avenue, Akron, OH 44314. Call collect (216) 753-2259. TF

ASPLUNDH LR45 BUCKET mounted on 1977 IH 1750 Diesel with chip box and cab protector. Hyd. tool circuit, new lower insert boom rebuilt by dealer in 86 including all new hoses. Asking $29,500. Also, 73 Wayne Brush Chipper 16″ 3/8 cu. inch. Asking $5,950. 715-356-7311. 10/86

SPYDERS — used and rebuilt. Also a complete line of replacement parts for your Spyder. Call or Write: Mobile Lift Parts, Inc., 5402 Edgewood Rd., Crystal Lake, IL 60014. 815-455-7363. 12/86

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HELP WANTED

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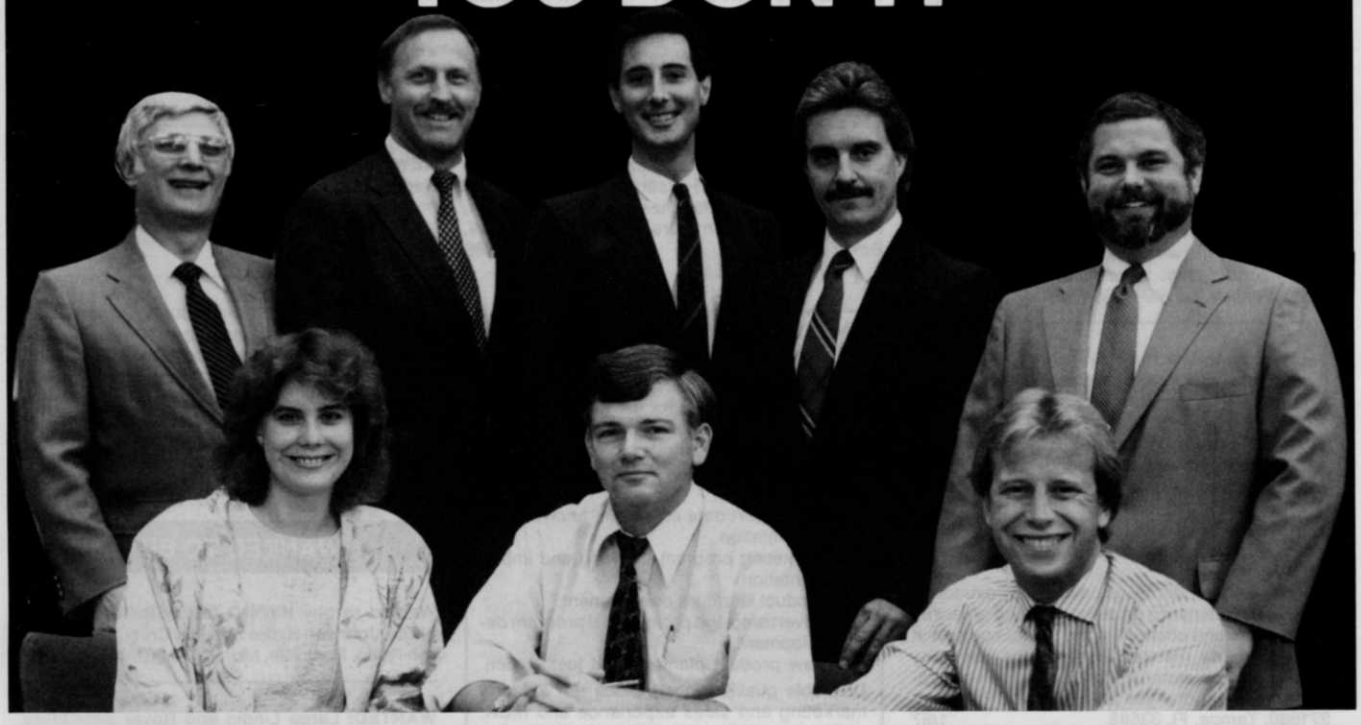
WANTED - Lawn Care Specialist!!! We are looking for a grass seed specialist who will serve as a customer relations person calling on Garden Centers Sod Growers and Turf Specialist via personal phone contact in the middle Atlantic State area. Please send resume to Vaughan's Seed Company, Chimney Rock Road, Bound Brook, NJ 08805. 10/86

MANAGEMENT TRAINEES - Northern Nurseries, an expanding, wholesale horticultural distributor, with several locations in the Northeast, has entry level positions available for aggressive, career-minded people. Candidates will be involved in day-to-day operation of distribution centers, training for advancement to management positions. Minimum 2 years trade experience with degree preferred, working knowledge of landscape plant materials, excellent communication skills with strong desire to learn and advance. Send current resume with salary history to Northern Nurseries, Inc., Attn: John Price, 5550 Victor-Manchester Rd., Farmington, NY 14425. 10/86

Sales Professional: To the Greens Industries in Mid-Atlantic region; must have "2 years" sales experience selling to lawn care, landscape, and tree care firms. A good knowledge of the business and customer's needs is necessary. Excellent compensation package offered. Please send resume to: Moyer & Son, Inc., 113 East Reliance Road, Souderton, Pennsylvania 18964. Attn: Specialty Fertilizer. 10/86

GET THE FEELING THEY KNOW SOMETHING YOU DON'T?



They do. It's their job to know things first and then pass that information on to you fast. Things like new turf management techniques, effective methods of insect and weed control, what really works... and what won't.

LOOK FAMILIAR?

They should. You've seen them often at turf shows, seminars, conventions—wherever industry news is in the making. They're the editorial and sales management team of WEEDS TREES & TURF. Please meet (sitting from left to right) Heide Aungst, Jerry Roche, Ken Kuhajda, (standing from left to right) Dick Gore, Bob Mierow, Ron Kempner, Jon Miducki and Bob Earley.

THERE'S NO GRASS GROWING UNDER THEIR FEET.

They apologize for not always being in when you call, but great stories are found in the field, not in the office. These pros know that the only way to really cover the green industry is to get out and be a part of it. From turf test plots in Oregon to the corridors of our nation's capital, they're following the leads, surveying the markets, and interviewing the landscape professionals who make our industry grow. Then, they use their years of experience to pull it all together, analyze and present it to you in a crisp, easy-to-read and easy-to-use style. That way, you have the information you need to do your job better, faster and more effectively.

The next time you want to know something about the green industry, give them a call. If you can't reach them at the office, don't worry. **They'll reach you** in the pages of WEEDS TREES & TURF.

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SUPERVISORS/FOREMEN NEEDED: Rapidly growing firm in Myrtle Beach, S.C. is seeking experienced project supervisors/foremen in landscaping, irrigation, maintenance and construction departments. Experience in scheduling and on-site supervision of single and multiple crews needed. Ambitious and quality oriented persons should submit resume and salary requirements to WTT Box 400. 10/86

PROJECT MANAGER: Excellent opportunity for career and goal oriented individual to work with a commercial landscape firm in Atlanta, Georgia. Must be experienced in all aspects of landscape construction and willing to assume total responsibility. Good salary, benefits and incentive program. Scapes,Inc., 404-956-7500. 10/86

Landscape Architects/Supervisors (project foremen) join a nationally acclaimed firm looking to expand into its second generation Long Island area supports a high budget landscape industry. Year round employment, company benefits and continuing education available. Experienced and aggressive people send resume to: **GOLDBERG & RODLER, INC.**, 216 East Main Street, Huntington, New York 11743. 10/86

Fleet Superintendent/Equipment Coordinator to perform maintenance on diesel/gas equipment 80 h.p to 1 h.p. and coordinate the use of equipment for a grounds maintenance service company throughout the state of Florida. Please send resume to Quandt-Ayer Enterprises, P.O. Box 271880, Tampa, FL 33688. 1/87

Sales and Service person needed in Virginia Beach area. Only experienced, licensed applicators with excellent customer service skills will be considered. Send resume and references to: Lawn Medic of Tidewater, P.O. Box 1786, Chesapeake, VA 23320. TF

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HELP WANTED: Land Estimator - KT Enterprises, Inc. is expanding its landscape installation department & has a challenging new position in our fast growing firm for the right person with exceptional sales ability. Must be experienced in take-offs and costing. Progressive design/build firm doing business in Washington, D.C. Metro area. Excellent salary, benefits & growth potential. Call John Warren 703-922-8540. 10/86

CHAIRPERSON GOLF COURSE/LANDSCAPE PROGRAMS: Master's degree in Plant/Soil Sciences, Business/Public Administration and two years' experience in Golf Course/Landscape Operations. Earned Doctorate preferred. Responsibilities include student recruitment, administration, public relations w/industry, student placement, supervision of faculty/staff, minimal teaching. Salary negotiable based on experience/qualifications. Deadline: Open. Send resume to Lake City Community College, Rt. 3, Box 7, Lake City, Florida 32055. (904)752-1822 ext. 313. EA/EO EMPLOYER. 10/86

EASTERN NEW YORK AND VERMONT IRRIGATION MANAGER-Seeking qualified manager for full time position to build up Irrigation Division. Will be responsible for Irrigation sales to Golf Courses, Municipalities, Residential/Commercial Contractors. Must have some knowledge of design. All company benefits. Please respond to: President, GEI, WTT Box 396. 10/86

NURSERY STOCK BUYER - Northern Nurseries, an expanding, multi-location, wholesale horticultural distributor, has an opening for a highly qualified individual, as Nursery Stock Buyer. Preferred Qualifications - Minimum 5 years of strong landscape/nursery business experience, large scale purchasing and/or sale of plant materials, and excellent communication skills. Excellent benefits and salary. Send complete resume and salary history to Northern Nurseries Inc., Attn: John Price, 5550 Victor-Manchester Rd., Farmington, NY 14425. Northern Nurseries is a Robert W. Baker Company. 10/86

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Rain Bird International, Inc., is seeking a person to be responsible for marketing and new product development for their golf, commercial, and residential irrigation products outside of the U.S.

TASKS INCLUDE:

—Fact report data collection, analysis and presentation.
—Marketing program planning and implementation.
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Desirable qualifications include turf industry marketing and sales experience and MBA, ability to speak Spanish or French and international business experience. Please send resume in confidence to:

PERSONNEL DEPT.
RAIN BIRD INTERNATIONAL
145 NORTH GRAND AVE.
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OUTSTANDING OPPORTUNITY FOR AN ARBORIST with sales management experience to join rapidly growing, full-service tree care company. All benefits and incentives. Call or send resume to **SAVE-A-TREE OF WESTCHESTER, INC.,** c/o Daniel Van Starrenburg, P.O. Box 527, Armonk, NY 10504. 914-666-8202. 10/86

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LANDSCAPE MAINTENANCE DIVISION MANAGER: Established landscape construction and nursery firm in Central Florida is looking for a self-starting manager to build a commercial maintenance division. Salary plus strong incentive bonus for an experienced professional with the desire to achieve. Call Mr. Singh (305) 831-8101. 10/86

USED EQUIPMENT

Reconditioned **BIG JOHN TRANSPLANTERS,** Models 60, 78, 88 - several to choose from. Call or write for detail sheet. **BIG JOHN** - South Central Region, 323 Crowley Road, Arlington, TX 76012. 817/277-6745. 10/86

BUCKET TRUCK: Hi Ranger 65', 57', 50'. Skyworkers with chip boxes. Asplundh bucket trucks with chip boxes. Asplundh brush chippers. Bean 55 gal. sprayers. Parkway Equipment Company, 633 Cecilia Drive, Pewaukee, WI 53072. 414-691-4306. TF

NEW AND USED EQUIPMENT—Asplundh, Hi Ranger and Lift-all forestry bucket trucks, Chipmore wood chippers. Mirk, Inc., (216) 669-3567, (216) 669-3562, 7629 Chippewa Road, Orrville, Ohio 44667. TF

BUCKET TRUCKS, Straight Stick, Corner Mount and Knuckle Boom Cranes. Brush Chippers - New Morbark Disc Type, New Woodchuck Drum Type. Best prices anywhere. Used Chippers - Asplundh, Woodchuck, etc. 2 to 8 usually in stock. Sprayers, Dumps, stakes, Log Loaders, Crew Cab Chip Box Dumps, Railroad Trucks, 50 in stock. Sold as is or reconditioned. Opkyke's Hatfield (Philadelphia Area) 215-721-4444. TF

WANTED TO BUY

Wanted to buy **HYDRO SEEDER.** Please send photo. Johnson Hydro Seeding Corp., 13751 Travilah Road, Rockville, Md. 20850 301/340-0805. TF

WANTED: Large Lindig and Royer Shredders. Lewis Equipment. 320 Third Street S.W., Winter Haven, FL 33880. (813) 294-5893. 4/87

POSITION WANTED

AVAILABLE: PROFESSIONAL TURF MANAGER - USA's most experienced Hybrid bermudagrass turf manager. Heavy experience in: Planning, construction, renovation, irrigation, machinery, growing-in and managing the finished complex. Years in consulting, multi-course, real estate as well as private clubs. Will relocate anywhere in Sunbelt. Certified Class A by Golf Course Superintendents of America. For resume write: Turf Manager, P.O. Box 635, Decatur, Georgia 30031. 12/86

MISCELLANEOUS

KELWAY® professional **SOIL ACIDITY** and **SOLUBLE SALTS TESTERS,** available from distributors nationwide. HB-2 and SST brochures from **KEL INSTRUMENTS CO., INC.,** P.O. Box 1869, Clifton, NJ 07015. (201-471-3954). 10/86

FREE PARTS CATALOG—If you own a 36"—48"—52" walk-behind mower and you feel you're paying too much for parts, call Preco Distributors toll-free and request our parts catalog. **BELTS, BLADES, GRASS CATCHERS, WHEELS AND LOTS MORE!** Replacement parts that fit: **BOBCAT, BUNTON, KEES, EXMARK & OTHERS.** 1 day shipping coast to coast available. All parts carry a 90-day warranty. Don't wait, call 24 hours a day. **TOLL-FREE 1-800-428-8004, in Mass. 413-596-5505. PRECO DISTRIBUTORS, 2400 BOSTON ROAD, WILBRAHAM, MA 01095.** TF

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A new standard of performance.

Until now, there's never been a utility vehicle designed and built specifically to meet your turf-care needs.

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The Cushman Eagle is not a converted golf cart. It's not a redesign. It's a revolutionary new turf utility vehicle that sets a new standard of performance.

You can choose from more options to meet a wider range of needs. Bodies made of sleek, dent-resistent polyurethane or time-tested diamond-plate steel. Models that allow four passengers to face forward. You get a smoother, more comfortable ride. More responsive handling. And longer service life.

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Test drive one at your Cushman dealer today or call for more information. You'll see that nothing else works as well or looks as good as the new Cushman Eagle.

Our Reputation is Built to Last.

CUSHMAN

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Toll-free: 1-800-228-4444

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The only sweepers with unique all-vacuum design that operate on both turf or pavement, wet or dry. Safe, powerful air picks up bottles, cans, as well as fine clippings to reduce thatch build-up.

- Sweeping widths from 4′ to 30′.
- 6″ × 10′ hand intake hose available.
- Hard surface filtration.
- No fingers or brushes to wear out—picks up by air only.
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- PTO models available.

MODEL FM-3. With 4 ft. sweeping width and 11 HP B&S engine. Ideal for landscaping maintenance and other general purpose sweeping.

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MODEL 80
Sweeps 48″ wide

MODEL 70 LD
Sweeps 54″ wide

MODEL FM-5
Lifts to Dump 96″

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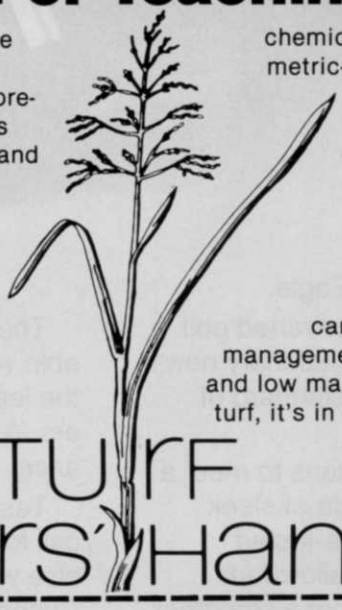
Finally, An Aid For Teaching Turfgrass

Superintendents, Contractors, Lawn Care Managers, New, On-the-Job Reference. The Turf Managers' Handbook is a comprehensive, organized approach to turfgrass science and care. It has been designed and written by leading turf specialists from Purdue, Dr. William Daniel and Dr. Ray Freeborg, for on-the-job reference and as a text for students.

The book contains 150 illustrations and 96 color photographs. Data includes 240 tables and forms. Included are specifications for rootzones, employment, calculations for chemical applications, and extensive metric-imperial conversion. Business and technical aspects of turfgrass management are covered in this 424-page book. Planning, purchasing, hiring, construction, and plant selection are put together for easy on-the-job reference. Markets covered include lawn care, sod production, golf course management, cemeteries, athletic fields, and low maintenance areas. If it concerns turf, it's in the Turf Managers' Handbook.



TURF managers' HANDBOOK

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EVENTS

OCTOBER

National Roadside Vegetation Management Association annual meeting, Oct. 15-17, St. Louis Clarion Hotel. Contact: Chuck Middleton, Green Brier Dr., R.D. 1, Norristown, PA, 19403. (215) 584-4938.

Florida Turfgrass Association annual conference and show, Oct. 19-22, Curtis Hixon Convention Center, Tampa, Fla. Contact: Bill Nass, Florida Turfgrass Association, 302 S. Graham, Ave., Orlando, FL, 32803-6332. (305) 898-6721.

Southwest Turfgrass Conference, Oct. 23-24, Holy Cross Retreat, Las Cruces, N.M. Contact: Charles R. Glover, extension agronomist, New Mexico State Univ., Box 3AE, Las Cruces, NM, 88003.

Associated Landscape Contractors of America workshop, Oct. 24, Sheraton Airport Plaza Hotel, Charlotte, N.C. ("Image Building and Marketing") Contact: ALCA, 405 N. Washington St., Suite 104, Falls Church, VA, 22046. (703) 241-4004.

International Society of Arboriculture, New England Chapter annual meeting, Oct. 27-28, Red Jacket Inn, North Conway, N.J. Contact: ISA, P.O. Box 71, 5 Lincoln Square, Urbana, IL, 61801. (217) 328-2032.

American Society of Consulting Arborists annual meeting, Oct. 29-Nov. 1, Opryland Hotel, Nashville, Tenn. Contact: Jack Siebenthaler, ASCA, 700 Canterbury Rd., Clearwater, FL, 33546. (813) 446-3356.

Tree Management Seminar, Oct. 30, University of California, Riverside, Calif. Contact: Tommy Foiles, San Bernardino County Cooperative Extenion, 777 E. Rialto Ave., San Bernardino, CA, 92415. (714) 387-2171.

NOVEMBER

National Institute on Park and Grounds Management conference, Nov. 2-6, Louisville, Ky. Contact: National Institute, P.O. Box 1936, Appleton, WI, 54913. (414) 733-2301.

California Landscape Contractors Association annual meeting, Nov. 9-12, Waiohai Hotel, Kauai, Hawaii. Contact: Larry Rohlfes, CLCA, 2226 K St., Sacramento, CA, 95816. (916) 448-2522.

Missouri Lawn and Turf Conference, Nov. 10-12, St. Louis Chase Park Plaza. Contact: Greg Martin, University of Missouri, 314 Hearns Bldg., Columbia, MO, 65211. (314) 882-4087.

Penn State Golf Turf Conference, Nov. 10-12, Keller Conference Center, Penn State Univ., University Park, Pa. Contact: Dr. Joseph Duich, Department of Agronomy, 21 Tyson Bldg., University Park, PA, 16802. (814) 865-9853.

PGMS/ALCA joint trade show, Nov. 11-12, Milwaukee Exposition and Convention Center. Contact: ALCA, 405 N. Washington St., Suite 104, Falls Church, VA, 22046; (703) 241-4004. PGMS, 3701 Old Court Rd., Pikesville, MD, 21208; (301) 653-2742.

To ensure that your event is included, please forward it, 90 days in advance, to: WEEDS TREES & TURF Events, 7500 Old Oak Boulevard, Cleveland, OH 44130.

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The pesticide issue

Recent assaults by the nation's media—especially the big three television networks—on pesticide use have brought the professional landscape manager some unwanted problems.

"This happened to me," relates one golf course superintendent, "the day after the story on '20/20' about the Navy lieutenant who allegedly died from exposure to pesticides used on a golf course.

"I got a call from a lawyer whose client had visited us the day before and was now breaking out in a rash. He demanded to know exactly what his client had seen being spread on the course. I think the lawyer had visions of a major killing in the courts.

"Of course, we keep pretty detailed daily records of what's being put down. So I went to my assistant and asked him what that man saw being applied. And do you know what it was? Not insecticide, not herbicide or fungicide. Not even fertilizer. The only thing our crews put on the course the previous day had been *sand topdressing*! Can you believe that?

"Needless to say, the lawyer didn't bother me again."

The "20/20" story, plus one on the "CBS Evening News with Dan Rather" brought a torrent of response from the green industry.

Jim Brooks, executive director of the Professional Lawn Care Association of America, wrote CBS news director Gordon Sauter. Essentially, he said that the network had no cause to air the story, and that the PLCAA takes the utmost pride in its service.

Brooks received this response from an unbending CBS vice-president Emerson Stone, who answered every point of Brooks' criticism: "Because we do take care in research, I am glad to have your specifics in case we examine this subject again. Thank you for your interest in CBS News. I hope that we do better by you in the future."

This 1986 version of what might be called anti-pesticidism—shoot and ask questions later—can only be met with long-term and very disciplined consumer education. And it is up to the individual lawn care company, landscape contractor and golf course superintendent. That means you.

Jerry Roche

Jerry Roche, editor

Questions and comments are encouraged.
Write or call editor Jerry Roche:
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Phone: 216-243-8100.

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Walter Betts and son, Tom, check the Rebel turf-type tall fescue before the sod is delivered.

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Ed Burns, Athletic Director of Holy Spirit H.S. in Absecon, NJ, expresses his satisfaction to Lofts' John Morrissey.

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